# EXHIBIT 1

**IN THE UNITED STATES DISTRICT COURT**
**FOR THE WESTERN DISTRICT OF TEXAS**
**WACO DIVISION**

| | |
|---|---|
| SMART MOBILE TECHNOLOGIES LLC,<br><br>Plaintiff,<br><br>v.<br><br>APPLE INC.<br><br>Defendant. | Case No. 6:21-cv-00603-ADA |
| SMART MOBILE TECHNOLOGIES LLC,<br><br>Plaintiff,<br><br>v.<br><br>SAMSUNG ELECTRONICS CO., LTD., and SAMSUNG ELECTRONICS AMERICA, INC.,<br><br>Defendants. | Case No. 6:21-cv-00701-ADA |

**DECLARATION OF HARRY BIMS IN SUPPORT OF**
**DEFENDANTS' OPENING CLAIM CONSTRUCTION BRIEFS**

I declare under penalty of perjury that the following is true and correct.

Executed at Menlo Park, CA on June 8, 2022

Harry Bims, Ph.D.

I, Harry Bims, Ph.D., hereby declare and state as follows:

## I. INTRODUCTION

1. I have been retained by Fish & Richardson P.C. on behalf of Defendants Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (collectively, "Samsung") as an expert in connection with the above captioned matter.

2. I understand that Smart Mobile Technologies, LLC ("Smart Mobile") has alleged that defendants Samsung and Apple Inc. ("Apple") infringe the following U.S. Patents and claims:

| Asserted Patents | Asserted Claims Against Samsung | Asserted Claims Against Apple |
|---|---|---|
| U.S. Patent 8,442,501 | 1-3, 5-6, 13, 16-18 | 1-3, 5, 6, 10, 13, 16-18 |
| U.S. Patent 8,472,936 | 1, 8-11, 13, 15, 17, 19 | 1, 8-11, 13, 15, 17, 19 |
| U.S. Patent 8,472,937 | 1-3, 5-6, 13, 16-18 | 1-3, 5-6, 10, 13, 16-18 |
| U.S. Patent 8,761,739 | 1-3, 5-6, 13, 16-18 | 1-3, 5-6, 10, 13, 16-18 |
| U.S. Patent 8,824,434 | 1-8 | 1-8 |
| U.S. Patent 8,842,653 | 1-21, 23-28 | 1-21, 23-28, 29, 30 |
| U.S. Patent 8,982,863 | None | 1-6, 8, 9, 11, 12, 14, 19, 24 |
| U.S. Patent 9,019,946 | 1-21, 26-30 | 1-21, 26-30 |
| U.S. Patent 9,049,119 | 20 | 20 |
| U.S. Patent 9,084,291 | 5-16 | None |
| U.S. Patent 9,191,083 | 5-9, 12-20 | 1, 5-9, 12-20 |
| U.S. Patent 9,319,075 | None | 1-3, 5 |
| U.S. Patent 9,614,943 | 1-2, 5-9, 12-17, 19-20 | 1, 2, 5-9, 12-17, 18, 19, 20 |
| U.S. Patent 9,756,168 | 2-5, 19-23, 25, 28-29, 34 | 2-5, 19-23, 25, 28, 29, 34 |

3. I have been asked to provide my opinion on how certain terms appearing in claims of the asserted patents would be understood by a person of ordinary skill in the art ("POSITA") in the field of the asserted patents.

4. All emphases (such as bolding, underlining, or italics) in quotations herein are mine, unless otherwise stated.

### A. Qualifications and Experience

5. My curriculum vitae is attached as Attachment A.

6. I have worked extensively in the field of digital communications. I have studied telecommunications and systems engineering since approximately 1981. Further, I have over 20

years of industry experience in computer network design, including the design of hardware and software for computer communications in a wireless context. During this period, I have designed and implemented various products that involve technologies related to the subject matter of the Asserted Patent.

7. I received a B.S. in Computer and Systems Engineering from Rensselaer Polytechnic Institute in 1985. In 1988, I received a M.S. in Electrical Engineering from Stanford University. In 1993, I received a Ph.D. in Electrical Engineering, also from Stanford University. As a graduate student at Stanford University, I studied the principles of digital communications theory, including data modulation and demodulation, error checking and correction algorithms, and the architecture and design of semiconductor circuits used for digital communications. My Ph.D. thesis at Stanford addressed the application of trellis coding and precoding to a digital modulation system, and was titled "Trellis Coding for Multi-Level, Partial Response Continuous Phase Modulation with Precoding."

8. After receiving my Ph.D. in 1993, I worked for Glenayre Technologies - Wireless Access Group, where I focused on hardware and software architecture and design, including inventing, designing, and building a patented computer system for real-time testing of two-way pagers and co-developing a wireless application protocol that included a CRC error checking algorithm. From 1999 to 2001, I was responsible for the software architecture for core SGSN and GGSN products for the GPRS market. I also held management responsibility for the Firmware, Hardware, Performance, and Systems Engineering Groups. In 2001, I developed a business plan for building network infrastructure for 802.11 enterprise networks, and then later that year founded AirFlow Networks, Inc. where I invented and received over eleven patents on its core technology, which was based on the 802.11 wireless local area network specification.

9. I am currently the President of Protocomm Systems, LLC and Bims Laboratories, LLC, both of which I founded. As the President of Bims Laboratories, Inc., I perform technical research in wireless technology standards, such as LTE, 5G, IEEE 802.11 ("Wi-Fi"), Bluetooth, and other network communication protocols.

10. I am also named as an inventor on twenty-three telecommunications-related United States patents:

- U.S. Pat. No. 6,259,911, entitled "Network Operations Center Hardware and Software Design";
- U.S. Pat. No. 6,557,134, entitled "ARQ Method for Wireless Communication";
- U.S. Pat. No. 6,760,318, entitled "Receiver Diversity in a Communication System";
- U.S. Pat. No. 6,788,658, entitled "Wireless Communication System Architecture Having Split MAC Layer";
- U.S. Pat. No. 6,862,448, entitled "Token-Based Receiver Diversity";
- U.S. Pat. No. 6,965,769, entitled "Testing Center";
- U.S. Pat. No. 7,149,196, entitled "Location Tracking in a Wireless Communication System Using Power Levels of Packets Received by Repeaters";
- U.S. Pat. No. 7,236,470, entitled "Tracking Multiple Interface Connections by Mobile Stations";
- U.S. Pat. No. 7,515,557, entitled "Reconfiguration of a Communication System";
- U.S. Pat. No. 7,668,542, entitled "Token-Based Receiver Diversity";
- U.S. Pat. No. 7,672,274, entitled "Mobility Support Via Routing";
- U.S. Pat. No. 7,689,210, entitled Plug-in-Playable Wireless Communication System";
- U.S. Pat. No. 7,876,704, entitled "Tunneling Protocols for Wireless Communications";
- U.S. Pat. No. 7,957,741, entitled "Token-Based Receiver Diversity";
- U.S. Pat. No. 8,027,637, entitled "Single Frequency Wireless Communication System";
- U.S. Pat. No. 8,064,380, entitled "Reconfiguration of a Communication System";
- U.S. Pat. No. 8,144,640, entitled "Location Tracking in a Wireless Communication System Using Power Levels of Packets Received by Repeaters";
- U.S. Pat. No. 8,189,538, entitled "Reconfiguration of a Communication System";
- U.S. Pat. No. 8,468,426, entitled "Multimedia-Aware Quality-of-Service and Error Correction Provisioning";

- U.S. Pat. No. 8,935,580, entitled "Multimedia-Aware Quality-of-Service and Error Correction Provisioning";
- U.S. Pat. No. 8,995,996, entitled "Methods and Apparatus for Performance Optimization of Heterogenous Wireless System Communities";
- U.S. Pat. No. 9,978,037, entitled "Personal Inventory and Product Support System"; and
- U.S. Pat. No. 10,332,121, entitled "Light-Based Data Entry for Personal Inventory and Product Support System".

11. In addition, I am a Technical Expert and former Vice-Chair and Secretary of the Institute of Electrical and Electronics Engineers (hereinafter "IEEE") 802.16 Working Group, which develops standards for long range, metropolitan-area wireless networks that incorporate many wireless protocol functions, procedures, and messages, such as random access procedures, adaptive modulation and coding, and base station handover procedures.

### B. Compensation

12. I am being compensated for my time at my usual consulting rate of $700 per hour, plus actual expenses. No part of my compensation depends on the outcome of this case or on the opinions that I render.

### C. Materials Considered

13. In preparing this declaration, I have relied upon my education, knowledge, and experience. I reviewed, among other things, the following materials:

- Any materials cited herein;
- The asserted patents and their file histories;
- Smart Mobile's infringement contentions

## II. UNDERSTANDING OF THE LAW

### A. Standard for Determining Person Having Ordinary Skill in the Art

14. I understand that patents are to be interpreted from the person having ordinary skill in the art at the time of the invention ("POSITA").

15. I have been informed that a POSITA is a hypothetical person who has full knowledge of all the pertinent prior art, and that courts may consider the following factors in determining the level of skill in the art: (1) type of problems encountered in the art; (2) prior art solutions to those problems; (3) rapidity with which innovations are made; (4) sophistication of the technology; (5) educational level of active workers in the field.

**B. Indefiniteness**

16. I have been advised by counsel that the "definiteness requirement" of the patent laws of the United States requires that patent claims particularly point out and distinctly claim the subject matter which an inventor regards as the invention.

17. Counsel has advised me that whether any claim terms or phrases are indefinite, should be determined from the perspective of a POSITA.

18. Counsel has also advised me that a patent is valid and its claims definite if they, when read in light of the specification and the prosecution history, inform, with reasonable certainty, a POSITA about the scope of the invention.

19. Counsel has also advised me that a patent is invalid for indefiniteness if its claims, read in light of the patent's specification and prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.

## III. LEVEL OF ORDINARY SKILL IN THE ART

20. I understand that defendants contend that a person of ordinary skill ("POSITA") in the field of the '501 family patents would have had a bachelor's degree in electrical engineering, or equivalent training, and approximately two years of experience working in the field of networking and wireless devices. Lack of work experience can be remedied by additional education, and vice versa.

21. I understand that defendants contend that a POSITA in the field of the '434 family patents would have had a bachelor's degree in electrical engineering, computer engineering, computer science, or a related field, and at least two years of experience related to the design or development of wireless communication systems, or the equivalent. Additional graduate education could substitute for professional experience, or significant experience in the field could substitute for formal education.

22. I agree with defendants that these proposed definitions are appropriate for the asserted patents, and I have applied them for purposes of my below opinions. However, it is also my opinion that these definitions are not significantly different from one another and either would be appropriate for any of the asserted patents. It is also my opinion that these definitions are approximate in the sense that my opinions would below would still apply if the definitions were modified slightly.

## IV. TABLE OF EXHIBITS ATTACHED TO THIS DECLARATION

23. True and correct copies of the documents noted below are attached as exhibits to this declaration.

| Number | Title |
|---|---|
| **Asserted Patents** | |
| 2 | U.S. Patent 8,442,501 |
| 3 | U.S. Patent 8,472,936 |
| 4 | U.S. Patent 8,472,937 |
| 5 | U.S. Patent 8,761,739 |
| 6 | U.S. Patent 8,824,434 |
| 7 | U.S. Patent 8,842,653 |
| 8 | U.S. Patent 8,982,863 |
| 9 | U.S. Patent 9,019,946 |
| 10 | U.S. Patent 9,049,119 |
| 11 | U.S. Patent 9,084,291 |
| 12 | U.S. Patent 9,191,083 |
| 13 | U.S. Patent 9,319,075 |
| 14 | U.S. Patent 9,614,943 |
| 15 | U.S. Patent 9,756,168 |

| Number | Title |
|---|---|
| **Applications and File Histories** | |
| 16 | Excerpts of the File History of 08/764,903 |
| 17-18 | Excerpts of the File History of 09/281,739, issued as U.S. Patent 6,169,789 |
| 19 | Excerpts of the File History of 09/617,608 |
| 20 | Excerpts of the File History of 09/591,381 |
| 21 | Excerpts of the File History of 13/615,274 |
| 22 | File History of 13/615,478 |
| 23 | Excerpts of the File History of U.S. Patent 8,442,501 |
| 24 | Excerpts of the File History of U.S. Patent 8,472,937 |
| 25 | Excerpts of the File History of U.S. Patent 9,191,083 |
| 26 | Excerpts of the File History of U.S. Patent 9,756,168 |
| **Extrinsic Evidence** | |
| 27 | NEWTON'S TELECOM DICT., 11th Ed. [DEFS-CC-000000277-DEFS-CC-000000291] |
| 28 | THE CONCISE OXFORD DICTIONARY OF CURRENT ENGLISH [DEFS-CC-000000040-DEFS-CC-000000055] |
| 29 | THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE (3d ed. 1996) [DEFS-CC-000000001-DEFS-CC-000000016] |
| 30 | NEWTON'S TELECOM DICTIONARY (16th ed. 2000) [DEFS-CC-000000296-DEFS-CC-000000312] |
| 31 | IEEE 100 THE AUTHORITATIVE DICTIONARY OF IEEE STANDARDS TERMS (2000), Seventh Edition [DEFS-CC-000000427-DEFS-CC-000000429] |
| 32 | RANDOM HOUSE WEBSTER'S COMPUTER & INTERNET DICTIONARY (1999), Third Edition [DEFS-CC-000000430-DEFS-CC-000000432] |
| 33 | BARRON'S DICTIONARY OF COMPUTER AND INTERNET TERMS (1998), Sixth Edition [DEFS-CC-000000424-DEFS-CC-000000426] |
| 34 | FREEDMAN'S THE COMPUTER DESKTOP ENCYCLOPEDIA [DEFS-CC-000000035-DEFS-CC-000000039] |
| 35 | FREEDMAN'S THE COMPUTER GLOSSARY [DEFS-CC-000000386-DEFS-CC-000000389] |
| 36 | DICTIONARY OF COMPUTER WORDS [DEFS-CC-000000056-DEFS-CC-000000059] |
| 37 | WEBSTER'S NEW WORLD DICTIONARY OF MEDIA [DEFS-CC-000000418-DEFS-CC-000000420] |
| 38 | NEWTON'S TELECOM DICTIONARY, 11th Ed. [DEFS-CC-000000317-DEFS-CC-000000329] |
| 39 | IEEE STANDARD FOR SOFTWARE MAINTENANCE, IEEE Std. 1219-1993 [DEFS-CC-000000209-DEFS-CC-000000253] |
| 40 | IEEE STANDARD GLOSSARY OF SOFTWARE ENGINEERING TERMINOLOGY, IEEE Std. 610.12-1990 [DEFS-CC-000000106-DEFS-CC-000000189] |
| 41 | CHAMBERS DICTIONARY OF SCIENCE AND TECHNOLOGY (1999) [DEFS-CC-000000017-DEFS-CC-000000025] |
| 42 | MICROSOFT COMPUTER DICTIONARY (4th Ed. 1999) [DEFS-CC-000000260-DEFS-CC-000000272] |

| Number | Title |
|---|---|
| 43 | CHAMBERS 21ST CENTURY DICTIONARY (1999) [DEFS-CC-000000029-DEFS-CC-000000031] |
| 44 | MERRIAM-WEBSTER'S COLLEGIATE DICTIONARY (10th Ed., 1997) [DEFS-CC-000000254-DEFS-CC-000000256] |
| 45 | MERRIAM-WEBSTER'S COLLEGIATE DICTIONARY (2000) [DEFS-CC-000000096-DEFS-CC-000000105] |
| 46 | WEBSTER'S NEW WORLD DICTIONARY OF COMPUTER TERMS (8th Ed., 2000) [DEFS-CC-000000410-DEFS-CC-000000417] |
| 47 | THE ELECTRICAL ENGINEERING HANDBOOK (Richard C. Dorf, ed., 2d ed. 1997) [DEFS-CC-000000060-DEFS-CC-000000071] |
| 48 | THE COMMUNICATIONS HANDBOOK (Jerry D. Gibson, ed., 1996) [DEFS-CC-000000032-DEFS-CC-000000034] |
| 49 | THE AUTHORITATIVE DICTIONARY OF IEEE STANDARDS TERMS (7th Ed., 2000) [DEFS-CC-000000093-DEFS-CC-000000095] |
| 50 | HARGRAVE'S COMMUNICATIONS DICTIONARY (IEEE Press, 2001) [DEFS-CC-000000086-DEFS-CC-000000088] |
| 51 | WEBSTER'S NEW WORLD DICTIONARY OF COMPUTER TERMS (8th Ed., 2000) [DEFS-CC-000000406-DEFS-CC-000000409] |
| 52 | NEWTON'S TELECOM DICTIONARY (16th ed. 2000) [DEFS-CC-000000292-DEFS-CC-000000295] |
| 53 | MICROSOFT COMPUTER DICTIONARY (4th Ed. 1999) [DEFS-CC-000000257-DEFS-CC-000000259] |
| 54 | SMT's '943 Patent Prel. Infr. Cont. Against Apple, Ex. L |

## V. OPINIONS REGARDING TERMS SPECIFIC TO THE '501 PATENT FAMILY

### A. "server" (653 (4, 15, 27, 28); 946 (1, 4, 15, 17, 27, 28, 29, 30); 075 (1); 168 (2, 4 19, 20, 28, 29, 34); 501 (1, 13, 16); 936 (1, 9, 11, 19); 937 (1, 13, 16); 739 (1, 13, 16); 863 (1, 4, 5, 6, 11, 14, 19, 24); 119 (20); 083 (6, 8); 943 (6))

| Defendants' Proposed Construction | SMT's Proposed Construction |
|---|---|
| Plain and ordinary meaning | A computing device or program or collection of computing devices or programs that provides resources, data, services, or programs to other computing devices or programs over a network, or that enables access to a network or network resources. |

24. In this field, the word "server" generally refers to a computer that "serves" client devices through a network.[1] It generally connotes to persons of skill in the art a particularly powerful computer capable of storing lots of data and providing that data to many client devices. Both now and at the time of the asserted patents, servers form the backbone of the Internet, in that servers store websites, enabling client devices to access those websites from anywhere in the world.

25. I do not find SMT's proposed construction to be consistent with how a POSITA would understand the plain and ordinary meaning of the word "server" as that term is used in the patent. Storing and providing data, such as website pages, exemplifies the sort of "service" that a server provides. Not just any sort of interaction between two computing devices, however, connotes that one of them is server. For example, two peer-to-peer devices merely exchanging data with each other would not be considered a server. Likewise, a client device that sends an email to a server (that is routed to another client device) would not be a server itself. In these

[1] Unless I specifically state otherwise, my opinions about the meaning of the claim terms addressed herein are from the perspective of the 1996-2000 timeframe when the Asserted Patents and the applications they claim priority to were filed.

examples, a client or peer-to-peer device is providing data to another device, but a POSITA would not consider either device to be a server, in the sense that it is not "serving" the other device. Likewise, a network access point (such as a Wi-Fi access point) or router can enable a client device to access the Internet or another network, but a POSITA would not consider a device merely providing routing functions alone to be server.

**B. "functional instruction" (501 (1); 936 (1, 13, 20); 937 (1); 739 (1); 119 (20)))**

| Defendants' Proposed Construction | SMT's Proposed Construction |
|---|---|
| Indefinite | Software that, when executed by a processor, provides a function. |

26. In my opinion, a POSITA would not be reasonably certain of the scope of claims containing this limitation. Various asserted claims recite the phrase "functional instructions." Claim 1 of the '501 patent, for example, illustrates how this phrase is used: "wherein the memory stores functional instructions including instructions for use in providing a plurality of functions to the wireless device, at least one of the functional instructions provided for switching between one or more networks including at least one public network."

27. The term "functional instructions," however, is generally not a term of art in the field of the Asserted Patents, and in my opinion, the patents do not provide guidance that makes it reasonably certain what this term means. For example, the patents describe at column 5 that functional instruction "sets" are capable of doing various things, but the patents do not explain what "functional instruction sets" are. It is unclear whether functional instructions are a form of software, and even if they are, what they are or how they would be created. The patents appear to describe functional instructions and software as distinct concepts, since the patents refer to both "functional instruction sets" and separately to "software" that are stored on a server for use by a mobile device. For an example, see the '501 patent at column 3, lines 58-59. The patents also

refer to "functional instruction software." For an example, see the '501 patent at column 5, lines 3-4. However, I do not see anything in the specification that clarifies what the difference in functional instructions and software is supposed to be in the context of these patents, or how a POSITA would know whether any particular type of software includes functional instructions or not.

28. In short, the term is not a term of art in this field, and in my opinion a POSITA would not be reasonably certain of what would qualify as a "functional instruction" as that term is recited in the claims.

**C. "switching between one or more networks . . ." (501, 936, 937, 739, 119)**

| Defendants' Proposed Construction | SMT's Proposed Construction |
|---|---|
| Indefinite | Plain meaning |

29. In my opinion, a POSITA would not be reasonably certain of the scope of claims containing this limitation. Various asserted claims recite the phrase "switching between one or more networks including at least one public network." Claim 1 of the '501 patent, for example, illustrates how this phrase is used: "wherein the memory stores functional instructions including instructions for use in providing a plurality of functions to the wireless device, at least one of the functional instructions provided for switching between one or more networks including at least one public network."

30. Mobile devices existed before 1996 (which I understand to be the earliest alleged effective filing date for some of the Asserted Patents) that were capable of connecting to one network and then "switching" to connect to a second network. Some common networks at the time included 2G cellular networks, such as GSM, D-AMPS, and IS-95, and local area networks for use in the home or office, two-way paging networks, and satellite networks.

31. It was known that mobile devices, such as multi-mode devices, could access different types of networks and switch between them to provide multiple access functionalities in a single device.

32. A POSITA could be reasonably certain about what it means to switch between "two" networks. For example, a device can communicate on a first network and then "switch" to communicating on a second network (referred to by a POSITA, for example, as a "handoff procedure"), and in that sense the device is switching between" two" networks. The patents, however, do not explain what switching between only "one" network means, and in my opinion a POSITA would not be reasonably certain of what it means. As I have explained above, a device can switch "from" communicating on one network to communicating on another network, in which case the device is switching "between" two networks. But, it is unclear what it means for a device to switch "between" just one network.

**D. "dynamic / dynamically" (434 (1); 501 (1, 2); 936 (1); 937 (2); 739 (1, 2); 863 (4); 168 (2, 4))**

| Defendants' Proposed Construction | SMT's Proposed Construction |
|---|---|
| Indefinite. | When and as needed, responsive to variable conditions and without the need for user intervention. |

33. In my opinion, a POSITA would not be reasonably certain of the scope of claims containing the identified limitation. Various claims recite the term "dynamic" or "dynamically," and in the claims, the terms are used to describe various activities. For example, '501 patent claim 1 recites "wherein the server enables dynamic conversion of the wireless device from a first function to a second function to provide a plurality of functions at the wireless device" and '501 patent claim 2 recites "The system of claim 1, wherein the wireless device is adapted to switch dynamically between local networks and public carrier networks."

34. The terms "dynamic" or "dynamically" are sometimes used in the field of the Asserted Patents, but not with a usage that would make sense in the context of the claim language at issue. For example, devices on Layer 3 computer networks are commonly assigned unique numerical addresses called IP addresses. Depending on the configuration of the network, a device could be assigned a "static" IP address that is fixed and does not change. Or, the device could receive a "dynamic" IP address that is not fixed but can generally change each time the device connects to the network. In this sense, "dynamic" means that the IP address is not fixed but is subject to change.

35. However, that is not the sense in which the claims at issue use the term. As noted above, the claims already require some sort of change – whether it is conversion of the wireless device or switching from one network to another. The claims describe these changes themselves as being "dynamic." Unlike the IP address example, the patents are not using "dynamic" to distinguish something static from something that changes, but to describe a particular type of change – that is, "dynamic" conversion or "dynamic" switching. However, it is unclear in the context of the patents what "dynamic" change means compared to change that is not "dynamic." In my opinion, the specification does not provide guidance that would make a POSITA reasonably certain of what "dynamic" means in the context of the claims that recite that term.

36. I have also reviewed dictionary definitions from the general timeframe of the Asserted Patents. Ex. 27 (NEWTON'S TELECOM DICT., 11th Ed. 207 ("Events are constantly changing.")); Ex. 28 (THE CONCISE OXFORD DICT. OF CURRENT ENGLISH 424 ("energetic; active; potent.")); Ex. 29 (THE AM. HERITAGE DICT. OF THE ENGLISH LANGUAGE 574 ("Marked by intensity and vigor; forceful.")). However, those definitions do not fit with how "dynamic" is used in the context of the patents and claims.

37. From its construction, SMT appears to believe that the term means events occur "without the need for user intervention" (among other requirements). However, the patent specifications do not specifically mention whether "user intervention" is or is not required for the events it describes as "dynamic." In my opinion, a POSITA would not understand from the specification's description of "dynamic" events that those events are required to occur "without user intervention."

**E. "wherein a private network includes a wireless local area network (WLAN) for use in a home or office" (501 (18); 739 (18))**

| Defendants' Proposed Construction | SMT's Proposed Construction |
|---|---|
| Indefinite | Plain meaning. |

38. In my opinion, a POSITA would not be reasonably certain of the scope of claims containing the identified limitation. Claim 18 of the '501 and '739 patents recites "The system of claim 1, wherein the public network includes a GSM network and wherein a private network includes a wireless local area network (WLAN) for use in a home or office."

39. The phrase "private network" refers to a type of computer network that is distinct from a "public network." Thus, the phrase "private network" does not refer back to anything in the independent claim, so it is unclear what relationship that phrase has to anything being recited in the independent claim. It is difficult to envision what sort of system would practice the patents. For example, does the "private network" meet this claim requirement as long as it exists anywhere, even if it has no relationship whatsoever to the elements of the system recited in the independent claim whatsoever? In my opinion, it would not be reasonably certain to a POSITA what "private network" is being claimed in these claims or what one must show of a "private network" for purposes of infringement or validity.

### F. "the prioritization includes data based on GPS or wireless local area network (WLAN)" (937 (18))

| Defendants' Proposed Construction | SMT's Proposed Construction |
|---|---|
| Indefinite | Plain meaning. |

40. In my opinion, a POSITA would not be reasonably certain of the scope of claims containing the identified limitation. Claim 1 of the '937 patent recites a memory that "stores prioritization data" related to connecting to a plurality of wireless networks. Claim 18 of the '937 patent then recites "The system of claim 1, wherein the prioritization includes data based on GPS or wireless local area network (WLAN)."

41. It is unclear in my opinion what "the prioritization includes data based on GPS or wireless local area network (WLAN)" recited by claim 18 of the '937 patent means. The patent does not use the word "priority" or "prioritization," and I do not otherwise see any guidance in the specification for what it means for a prioritization to be "based on" GPS or "based on" a WLAN. SMT proposes a plain meaning for this term, so it is unclear where SMT believes that this concept is described in the specification. I reserve the right to provide opinions in response to SMT's position, to the extent SMT further clarifies what it believes to be the description in the specification of this concept, or what it believes to be the plain meaning of this term.

### G. "A mobile device communication system . . ." (119 (20))

| Defendants' Proposed Construction | SMT's Proposed Construction |
|---|---|
| The preamble is limiting. The server is part of the claimed mobile device communication system. | Plain meaning, with the exception of "mobile device" and "server," which should be construed as proposed by Smart Mobile, and "the server enables conversion of the mobile device from a first function to a second function by providing a plurality of functions to the mobile device," which should be construed as "the server enables conversion of the mobile device from a first capability to a second capability / plurality of wireless device capabilities." |

42. I am not a legal expert on whether the claims of a preamble should be construed as limiting for a particular claim. However, I understand the parties dispute this for claim 20 of the '119 patent, and I have been asked to provide certain technical opinions related to this issue. For example, I have been asked for my opinion on whether the preamble's requirement of "a mobile device communication system" recites essential structure, is essential to understanding limitations in the body of the claim, or recites additional structure that the specification describes as important.

43. As part of my analysis, I am informed that SMT is asserting that claim 20 covers a mobile device alone, and not the combined system of a mobile device and a server. To the extent the body of the claim is interpreted in that way (that is, not to require a server), in my opinion the preamble's requirement of "a mobile device communication system" (that is, the combined system of a mobile device and server) recites essential structure, is essential to understanding limitations in the body of the claim, and recites additional structure that the specification describes as important.

44. Claim 20 of the '119 patent recites a number of limitations related to the server:

> 20. A mobile device communication system, comprising:
>
> a mobile device which supports voice and data communications, wherein the mobile device is configured for voice calls using a first wireless network; and
>
> at least one memory, wherein a processor is communicatively coupled with the at least one memory,
>
> wherein the at least one memory stores functional instructions including instructions for use in providing a plurality of functions to the mobile device, wherein the mobile device is configured for switching between one or more networks including at least the first wireless network, the first wireless network operating using a FCC approved public or carrier frequency, and wherein the mobile device is configured to transmit and receive voice on the first wireless network, wherein the first wireless network is an Internet Protocol (IP) data network, and

> wherein the at least one memory further stores a plurality of communication protocols, that facilitate communication between a server and the mobile device, wherein the server is configured to connect to an Internet network or a carrier network, and wherein the server enables conversion of the mobile device from a first function to a second function by providing a plurality of functions to the mobile device and wherein the mobile device is configured to communicate using Internet protocol.

45. Among other things, claim 20 requires that the server "enables conversion of the mobile device from a first function to a second function by providing a plurality of functions to the mobile device." The specification describes this as an important aspect of the invention, because by providing functions to the mobile device upon request, the server allows the mobile device to convert from one function to another. In that respect, the system recited in claim 20 would not work without the server enabling this conversion.

46. For example, Figure 2A of the '119 patent, is reproduced below. This figure depicts the server as Server C.

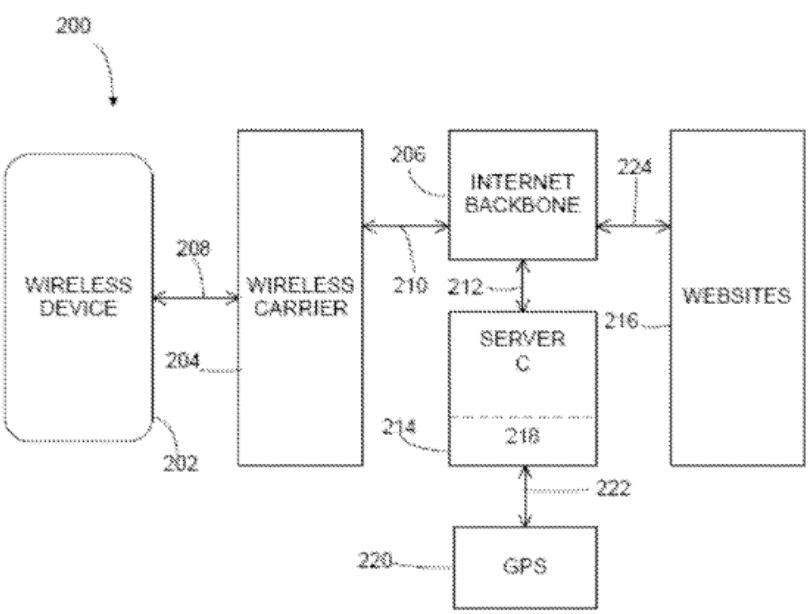


FIG. 2A

47. The specification consistently and repeatedly describes the server as critical to the invention because it is what enables the device to be reconfigured to work in different environments. Examples of this are found at column 2, lines 50-53, column 3, line 66 through column 4, line 1, and at column 4, lines 13-14. The "Summary of the Invention" (which is at column 1, lines 51-57), states that the "present invention" provides a "wireless communication and control system," and it then describes that system as including both a "central server" and a "wireless device." It describes that the server provides an important role in the system, communicating protocols to the wireless device "to configure the system as one of an arbitrary number of intelligent appliance controllers" or "as one of a selection of Internet terminals." *Id.*, 1:57-62. Likewise, the specification later describes the "present invention" as a system featuring a "dynamically configurable device utilizing the power of the Internet and a central server." *Id.*, 3:24-26.

### H. "the wireless device transmitter and receiver are independently tunable to one or more frequencies" (168 (2))

| Defendants' Proposed Construction | SMT's Proposed Construction |
|---|---|
| Indefinite | The transmitter and receiver of the handheld communication device each may be tuned to one or more frequencies. |

48. In my opinion, a POSITA would not be reasonably certain of the scope of claims containing this limitation.

49. To my knowledge, the term "independently tunable" is not a term of art in the field of the Asserted Patents. In addition, I do not find any guidance in the specification that would make a POSITA reasonably certain as to what "the wireless device transmitter and receiver are independently tunable to one or more frequencies" means in the context of claim 2 of the '168 patent. Not only is it unclear what "independently tunable" itself means, but it is also unclear what

it means for "the wireless device transmitter and receiver" to be independently tunable. There are a number of possible interpretations, such as (1) the transmitter's tuning could be "independent" from the receiver's tuning, (2) the transmitter or the receiver could be "independent" from some outside influence, and (3) the transmitter and the receiver (somehow together) could be "independent" from some outside influence. The specification sheds no light on which, if any, of these interpretations apply. Moreover, what it means to be "independent" is still unclear in each of these contexts. Generally speaking, the tuning still must depend on something, and the patent provides no guidance what that tuning must be independent of.

50. I do not see anywhere where the specification provides guidance for what "independently tunable" in this context might be, particularly since the one place that the '168 patent mentions "independently tunable", which is column 6, lines 42-45, does no more than repeat the claim language: "The Transmitter and Receiver are independently tunable to one or more frequencies . . . ." Likewise, the instances in the patent that discuss tuning does not shed light on what it means to be "independently tunable." Column 2, lines 36-38 state that it is desirable for a mobile device to be "dynamically tuned for transmit and receive functions suitable for each environment." Setting aside the ambiguity of what it means to "tune for transmit and receive functions," this passage does not say anything about whether transmitters and receivers are tuned to different frequencies, whether they are both tuned to the same frequency, or whether they are "independent" of each other or of something else. Column 6, lines 12-14 state that "Transmit and Receive frequencies may be tuned to one or more primary values and one or more subsidiary values." Again, this passage says nothing about what it means for a transmitter and/or receiver to be independently tuned. Nor does it say that the transmitter and the receiver are tuned to different frequencies. Thus, to the extent SMT argues that the phrase means the device must have the ability

to tune a transmitter to a different frequency than a receiver, I do not see where the specification discusses that concept. Likewise, to the extent SMT argues that this phrase means a device must be able to tune its transmitter, receiver, or both "independently" of something other influence, it is not clear what that other influence could be in the context of the patents.

### I. "one or more primary values and subsidiary values" (168 (2, 4))

| Defendants' Proposed Construction | SMT's Proposed Construction |
|---|---|
| Indefinite | "Primary values:" a set of frequencies associated with a preferred wireless network that is either a public carrier network or a local area network.<br>"Subsidiary values:" a set of frequencies associated with a non-preferred wireless network that is a local area network if the preferred wireless network is a public carrier network or is a public carrier network if the preferred wireless network is a local area network. |

51. In my opinion, a POSITA would not be reasonably certain of the scope of claims containing this limitation.

52. Claim 2 of the '168 patent recites "wherein the wireless device is enabled to be tuned to transmit and/or receive frequencies including one or more primary values and subsidiary values." Claim 4 of the '168 patent recites "wherein the device is enabled to be tuned to transmit and/or receive frequencies including one or more primary values and subsidiary values."

53. It is unclear what these claims mean by referring to tuning frequencies "including one or more primary values and subsidiary values." This is especially true given that the claims also later recite dynamically changing frequencies, but the patent does not explain why the device would both tune to "primary values" and "secondary values" (assuming value refers to a particular frequency) yet also dynamically change frequencies. The patent also does not clarify what it means by "primary values" and "subsidiary values." At column 6, lines 12-14, the patent repeats the language of the claim "Transmit and Receive frequencies may be tuned to one or more primary

values and one or more subsidiary values" but merely repeating the claim language does not explain what the language means. The patent more often uses the words "primary" and "subsidiary" or "secondary" to describe modes rather than frequencies. In any event, I find this particularly confusing in interpreting the meaning of this claim, because at Figure 4 the patent appears to indicate that which mode is "primary" can be changed—so it is especially unclear what it means for one mode to be primary relative to the others.

54. I do not find SMT's proposed construction to resolve this ambiguity or be supported by the patent. The patent does not describe "primary" and "subsidiary" as referring to whether one frequency is preferred over another. Instead, the patent talks about whether a particular mode is preferred. The patent talks about preferred modes at column 4, lines 10-17 and at column 7, lines 54-61, but these passages do not explain what it means for one mode to be preferred or how that it is determined. And even if the patent described "primary" and "subsidiary" as referring to whether one frequency is preferred over another, it does not describe the preferred mode as having a "set of frequencies" as reflected in SMT's proposed constructions. To the contrary, column 1, lines 13-15 describe devices as operating at a "single set frequency"—not a set of frequencies, plural. Likewise, column 3, line 47 mentions a "set frequency, Fp." So when the specification uses the word "set," at least in these passages, it is referring to a particular frequency and not a set of frequencies.

### J. "the software is associated with a user and the device stored in a profile" (168 (4))

| Defendants' Proposed Construction | SMT's Proposed Construction |
|---|---|
| Indefinite | The software stored on the server is for a plurality of wireless devices and for a plurality of applications for the plurality of wireless devices, and is associated with information, about a user and the device, that is stored in a profile. |

55. In my opinion, a POSITA would not be reasonably certain of the scope of claims containing the identified limitation.

56. Claim 4 of the '168 patent recites "wherein the software is associated with a user and the device stored in a profile." It is unclear what this language means in the context of the claim.

57. A first problem with this claim language is that it recites "the software" when claim 4 has not previously recited in any antecedent basis software in the claim. Thus, based on the structure of the claim, it is unclear what "the software" is intended to reference.

58. A second problem is that it is unclear what must be stored in a profile. Clearly, a physical user and physical device cannot be stored in a profile. Another possible interpretation of the claim is that the "software" is what has to be stored in a profile, but the sentence structure of the claim as written does not suggest that. Otherwise, the claim would have been written to say that the software is associated with a user and the device "and is" stored in profile. In addition, the specification never states that software is stored in a profile.

59. The specification discloses very little about what a "profile" is in the context of the invention or what it is intended to store. All the specification at column 3, lines 57-58 and at column 7, lines 33-34 discloses about a profile is that: "A CT/MD 202 can store profiles and other user specific information on the Server C 214". By referring to profiles and "other user specific information" in this sentence, the specification suggests that a "profile" is a type of user specific information, but the specification never states what the "profile" stores.

60. Based on my review of this claim language in the context of the specification, my opinion is that a POSITA would not be reasonably certain of what it means or what must be stored in a profile.

61. I do not find SMT's proposed construction to resolve this ambiguity or be supported by the patent. SMT's construction changes the claims to recite that the software is associated with "information about" the user and a device, and SMT's construction appears to require that it is this "information about" the user and a device that is stored in a profile. Even setting aside that this is not how the claim is drafted, the specification does not disclose that a "profile" stores information about a "device." As discussed above, in the only two sentences where the specification discusses a "profile," it simply recites that the CT/MD can store profiles and "other user specific information" are stored on a server.

**K. "wherein responsive to a request from the one or more wireless device to a website or URL associated with a website server or a network environment, the one or more wireless device receives an indicator of a software application to be downloaded from the remote server" (168 (19))**

| Defendants' Proposed Construction | SMT's Proposed Construction |
|---|---|
| Indefinite | Plain meaning, with the exception of "wireless device," "server," and "application," which should be construed as proposed by Smart Mobile. |

62. In my opinion, a POSITA would not be reasonably certain of the scope of claims containing the identified limitation.

63. Claim 19 of the '168 patent recites "The system of claim 2, wherein responsive to a request from the one or more wireless device to a website or URL associated with a website server or a network environment, the one or more wireless device receives an indicator of a software application to be downloaded from the remote server."

64. It is unclear what "the one or more wireless device" of dependent claim 19 refers to, as independent claim 2 does not mention "one or more" wireless devices. It instead mentions a server storing software for "use by a plurality wireless devices," before going on to focus on a particular "wireless device" that must have specific requirements. In the below claim, I highlight

the two separate usages of "wireless device" in claim 2—**bold** is used to show the first usage (referring to the "plurality of wireless devices") and underlining is used to show the second usage (referring to a particular wireless device).

> 2. A system comprising:
>
> a remote server configured to store wireless device software for a plurality of different functions or applications for use by a **plurality of wireless devices**,
>
> wherein the remote server stores in memory software for a wireless device, wherein the remote server sends to the wireless device software, wherein the remote server stores profiles of user specific information,
>
> wherein the wireless device is enabled for voice and data communication,
>
> wherein the wireless device includes one or more functions of a cellular telephone, PDA, handheld computer, or multifunction communication device, or combinations thereof, wherein the wireless device is configured to use Internet protocol;
>
> wherein the software controls a plurality of the hardware components on the wireless device;
>
> wherein the wireless device is configured to transmit and receive at a plurality of frequencies: wherein the wireless device is enabled to be tuned to transmit and/or receive frequencies including one or more primary values and subsidiary values;
>
> wherein the wireless device transmitter and receiver are independently tunable to one or more frequencies for operation in different environments based on the instructions of internal controller electronics and/or that of the server wherein the wireless device dynamically changes its frequency for communication; wherein the wireless device uses a power level for an operating environment; and wherein both power output and channel bandwidth as are dynamically changed in real time.

65. Neither usage appears to correspond to the "one or more wireless device" recited by claim 2.[2] Thus, in my opinion, a POSITA would not be reasonably certain what "one or more wireless device" dependent claim 18 is referring to.

**L. "more precise location" (168 (21))**

| Defendants' Proposed Construction | SMT's Proposed Construction |
|---|---|
| Indefinite | Plain meaning. |

66. In my opinion, a POSITA would not be reasonably certain of the scope of claims containing this limitation.

67. Claim 21 of the '168 patent recites "The system of claim 2, wherein the device determines a more precise location using both GPS location and a network box location." This language is confusing and unclear. Claim 2 does not recite any "location" so it is unclear what claim 2 means by requiring determination of a "more precise" location. That is, it is unclear what is the less precise location of claim 2's location.

68. In addition, the '168 patent specification at column 4, lines 4-6 states that the use of GPS alone will provide an "exact" location. Thus, it would be inconsistent with the specification to interpret the claim to mean that the device determines a "more precise location" by using both GPS and a network box location, than it could by using only one of the two. Given the specification's statement that GPS provides an "exact" location, a POSITA would not be reasonably certain what it means for the device to determine "more precise location using both GPS location and a network box location," as recited in claim 21 of the '168 patent.

## VI. OPINIONS REGARDING TERMS SPECIFIC TO THE '434 PATENT FAMILY

**A. "system on a chip" ('291 patent claims 5, 15)**

[2] I am informed by counsel that "plurality" in patent claims means two or more.

| Defendants' Proposed Construction | SMT's Proposed Construction |
|---|---|
| Plain and ordinary meaning. | An integrated circuit that integrates multiple components, including a central processing unit, on a single chip. |

69. In my opinion, the term "system on a chip" has a clear meaning to a POSITA. For example, a survey of different dictionaries and technical treatises online provide the following definitions, all of which convey that a "system on a chip" refers to a single chip that contains an entire system:

- An integrated circuit (also known as a "chip") that integrates all or most components of a computer or other electronic system. These components almost always include a central processing unit (CPU), memory interfaces, on-chip input/output devices and secondary storage interfaces, often alongside other components such as radio modems and a graphics processing unit (GPU) – all on a single substrate or microchip. https://en.wikipedia.org/wiki/System_on_a_chip

- A system-on-a-chip (SoC) is a microchip with all the necessary electronic circuits and parts for a given system, such as a smartphone or wearable computer, on a single integrated circuit (IC). https://www.techtarget.com/iotagenda/definition/system-on-a-chip-SoC#:~:text=A%20system%2Don%2Da%2D,single%20integrated%20circuit%20(IC).

- an integrated circuit or an IC that takes a single platform and integrates an entire electronic or computer system onto it. https://anysilicon.com/what-is-a-system-on-chip-soc/

70. These definitions are not contemporaneous with the patents, but are consistent with how a POSITA would interpret the phrase in 1999. For example, Newton's Telecom Dictionary from 2000 defines "system on a chip" consistently. *See, e.g.*, Ex. 30, NEWTON'S TELECOM DICTIONARY (2000) 817 ("**SOC** System-On-a-Chip. A silicon integrated circuit which combines generic functions … with custom design elements to create a device that contains all major elements of system on one integrated chip.").

71. Thus, the term "system on a chip" and its well-known abbreviation, "SOC" have a specific meaning in the industry. In fact, both are routinely and interchangeably used to identify a specific component in electronic devices.

72. Smart Mobile's proposed construction ("an integrated circuit that integrates multiple components, including a central processing unit, on a single chip") would result in confusion. Smart Mobile's construction is "An integrated circuit that integrates multiple components, including a central processing unit, on a single chip." The first part of the construction requires that the "integrated circuit" itself "integrates multiple components," but does not state which type of "components" are intended to be among the "multiple components." This language is confusing because an integrated circuit is, by definition, a collection of electrical components (such as transistors and resistors):

> What are integrated circuits?
> An integrated circuit (IC), sometimes called a chip, microchip or microelectronic circuit, is a semiconductor wafer on which thousands or millions of tiny resistors, capacitors, diodes and transistors are fabricated. An IC can function as an amplifier, oscillator, timer, counter, logic gate, computer memory, microcontroller or microprocessor.
> An IC is the fundamental building block of all modern electronic devices. As the name suggests, it's an integrated system of multiple miniaturized and interconnected components embedded into a thin substrate of semiconductor material (usually silicon crystal).
> https://www.techtarget.com/whatis/definition/integrated-circuit-IC. See also

https://www.britannica.com/technology/integrated-circuit ("integrated circuit (IC), also called microelectronic circuit, microchip, or chip, an assembly of electronic components, fabricated as a single unit, in which miniaturized active devices (e.g., transistors and diodes) and passive devices (e.g., capacitors and resistors) and their interconnections are built up on a thin substrate of semiconductor material (typically silicon).")

73. Thus, every integrated circuit "integrates multiple components" and it is not clear what Smart Mobile's proposed construction adds with that language.

74. And as set forth in the citations above, every integrated circuit is also typically "on a single chip." Thus, according to Smart Mobile's proposal, any such integrated circuit that includes a CPU is a SOC.

75. Smart Mobile's proposed construction of "an integrated circuit that integrates multiple components" is also confusing because it is unclear how this definition is intended to relate to what a POSITA would understand to be a SOC. This definition is not coextensive with what a POSITA would consider to be an SOC. Thus, Smart Mobile's construction would cause confusion as to why something that conventionally is considered an SOC is nonetheless not an SOC under Smart Mobile's construction, and also why something that is conventionally not considered an SOC is nonetheless considered an SOC under Smart Mobile's construction.

### B. "is configured to" ('434 patent claims 1, 6, '943 patent claims 1, 5, 8, 12, '653 patent claims 1, 4, 8, 14, 17, 27, '946 patent claims 1, 4, 8, 14, 17, 27, '291 patent claim 5, 083 patent claims 5, 8, and 12)

| Defendants' Proposed Construction | SMT's Proposed Construction |
|---|---|
| Plain and ordinary meaning, which is "actually programmed to" | Plain meaning |

76. Defendants' construction is consistent with my opinion as to what "configured to" means to a POSITA. For example, dictionaries define "configure" as "[t]o initialize a device so that it operates in a particular way." Ex. 31, IEEE 100 THE AUTHORITATIVE DICTIONARY OF IEEE STANDARDS TERMS (2000), Seventh Edition, 217; Ex. 32, RANDOM HOUSE WEBSTER'S COMPUTER & INTERNET DICTIONARY (1999), Third Edition, 115 ("configure. To set up a program or computer system for a particular application."); Ex. 33, BARRON'S DICTIONARY OF COMPUTER AND INTERNET TERMS (1998), Sixth Edition, 103 ("configure. To set up a computer or program to be used in a particular way. Many commercial software packages have to be configured, or installed;

this involves setting them up for a particular machine (including video card and printer) and for a particulate user's preferences.").

77. These definitions are also consistent with the intrinsic record. For example, the '434 patent uses "configured" to refer to a specific configuration, and not just the capability of supporting certain features:

- "The multiple T/R capability allows the single CT/MD to perform tasks in different environments—each T/R being specifically designed or configured for that specific purpose."
- "The base station or the network box, configured as described in the present invention at the hardware level offers universal functionality."
- "The network box or network boxes may also be used to configure a predominantly optical network that has wireless capability as an adjunct or a predominantly wireless network that has optical capability as an adjunct."

78. The last instance from the list above is instructive, as it juxtaposes the use of "configure" (meaning that the product contains a certain feature) with an existing capability in the device (that requires subsequent configuring).

79. Based on the intrinsic record, these dictionary definitions and my personal knowledge, construing the term "configured to" as "actually programmed to" is consistent with how a POSITA would interpret the term.

### C. The ". . . transmission interface is created . . ." terms ('653 Patent, Claim 1 and '946 Patent, Claim 1)

| Defendants' Proposed Construction | SMT's Proposed Construction |
|---|---|
| Indefinite | Plain meaning, with the exception of "interface/s," "mobile device" and "multiplexed," which should be construed as proposed by Smart Mobile. |

80. In my opinion, a POSITA would not be reasonably certain of the scope of claims containing the identified limitation.

81. There are two terms that I refer to as the ". . . transmission interface is created . . ." terms:

- "wherein a transmission interface is created and wherein said transmission interface uses a plurality of IP enabled interfaces on the mobile device which utilize the plurality of wireless transmit and receive components on the mobile device to enable a single interface comprised of multiplexed signals from the plurality of wireless transmit and receive components" ('653 Patent, Claim 1)

- "wherein a first interface for transmission is created and wherein said first interface for transmission uses a plurality of interfaces for Internet Protocol communication on the mobile device which utilize the plurality of wireless transmit and receive units on the mobile device to enable a single interface comprised of multiplexed signals from the plurality of wireless transmit and receive units" ('946 Patent, Claim 1)

82. These two terms are very similar. Claim 1 of the '946 patent uses slightly different language to refer to the interfaces. But for the analysis I provide in this report, my opinions do not change based on the slight differences in the claims.

83. It is my opinion that these terms are indefinite because the scope of the claim terms is not reasonably certain. I come to this conclusion because there are multiple phrases in the terms that are unclear, and there are multiple relationships between subparts of the terms that are also unclear.

84. ***First,*** the terms include different "interfaces," but it is unclear what the structural differences are between these interfaces, and one of the interfaces ("single interface comprised of multiplexed signals") is not common to the understanding of a POSITA. The '653 patent includes 1) a transmission interface; 2) an IP enabled interface; and 3) a single interface comprised of multiplexed signals. The '946 patent includes 1) an interface for transmission; 2) interfaces for Internet Protocol communication; and 3) single interface comprised of multiplexed signals.

85. I do not know of any common understanding of what specific hardware or structure constitutes a "transmission interface" or an "IP enabled interface." The phrase "single interface

comprised of multiplexed signals" is the most ambiguous. The claims refer to the "single interface" based on a signal format—i.e., a "multiplexed" signal. But a POSITA would not understand a multiplexed format to have any known relationship to an "interface." The claim language recites that the interface is "comprised of" these multiplexed signals, but that is not a known concept. In fact, a POSITA would not use that type of language, and it is unclear what it means for the "single interface" to be comprised of signals.

86. The '653 patent and the '946 patent do not provide any helpful context. Outside of the claims, neither of them refers to a "transmission interface," "IP enabled interface," "interface for transmission," "interfaces for Internet Protocol communication" or "interface comprised of multiplexed signals." While "transmission interface" and "IP enabled interface" describe functional capabilities of the interfaces, neither clarify the scope of the structure.

87. ***Second,*** the relationship between the transmission interface and the IP interfaces is unclear. Claim 1 of the '653 patent requires that the "transmission interface uses a plurality of IP enabled interfaces on the mobile device":

> wherein a transmission interface is created and wherein said transmission interface uses a plurality of IP enabled interfaces on the mobile device which utilize the plurality of wireless transmit and receive components on the mobile device to enable a single interface comprised of multiplexed signals from the plurality of wireless transmit and receive components

88. Claim 1 of the '946 patent similarly requires that the interface for transmission "uses" interfaces for Internet Protocol communication. It is unclear what it means by the transmission interface "**uses**" a plurality of IP enabled interfaces. That terminology is ambiguous, and would not assist a POSITA in determining the scope of the phrase. The claim does not even specify how the transmission interface uses the plurality of IP enabled interfaces.

89. As with the prior point, the ’653 patent and the ’946 patent do not provide any helpful context. Neither patent describes an interface “using” another interface.

90. ***Third,*** the relationship between the interfaces and the wireless transmit and receive components is unclear. Claim 1 of the ’653 patent includes the phrase “which utilize the plurality of wireless transmit and receive components.” This phrase is intended to modify some preceding subpart of the term, but it is unclear which specific subpart that is. However this terminology is ambiguous and would not assist a POSITA in determining the scope of the claim.

91. Based on the structure of the term, the clause “which utilize . . .” could modify (1) the “mobile device”; (2) the “plurality of IP enabled interfaces”; or (3) the “transmission interface.” The most grammatically correct reading of this term is that the “which utilize . . .” clause modifies the “plurality of IP enabled interfaces” because “utilize” is a plural verb and “a plurality of IP enabled interfaces” is the only plural noun in the phrase. That interpretation cannot be correct, however, because under that interpretation, the term requires that the IP enabled interfaces use multiple transmit and receive components together to enable a single interface. This interpretation conflicts with the remainder of the term, which indicates that the “single interface” receives signals from the “transmit and receive components” (and thus, is separate). Claim 1 of the ’946 patent has a similar issue.

92. As with the prior point, the ’653 patent and the ’946 patent do not provide any helpful context. Neither patent describes this limitation.

93. ***Fourth,*** the requirement for a “single interface” is unclear. There are at least two possible interpretations of that language in these terms. One potential interpretation is that the mobile device has a “single” interface that is comprised of multiplexed signals. Another potential interpretation is that all of the wireless transmit and receive units on the mobile device enable a

"single" interface within the device. Either interpretation is possible, and a POSITA would be unable to determine which is correct.

94. As with the prior point, the '653 patent and the '946 patent do not provide any helpful context. Neither patent describes this limitation.

95. These four points each independently and collectively make it impossible to set forth the bounds of the terms with reasonable certainty.

**D. "wherein the first wireless transmit and receive component is enabled to communicate using one or more antennas simultaneously" / "wherein the first wireless transmit and receive unit is enabled to communicate using one or more antennas simultaneously" 653 (14), 946 (14)**

| Defendants' Proposed Construction | SMT's Proposed Construction |
|---|---|
| Indefinite | Plain meaning. |

96. In my opinion, a POSITA would not be reasonably certain of the scope of claims containing the identified limitation.

97. Claim 14 of the '653 patent and the '946 patent require a "wireless transmit and receive component/unit" that "is enabled to communicate ***using one or more antennas simultaneously***." However, that language is indefinite because it does not inform a POSITA, with reasonably certainty, about the scope of the invention, when read in light of the specification, and the prosecution history.

98. In particular, a POSITA would not understand what it means to "use one or more antennas simultaneously." The claim contemplates using "one" antenna, so it cannot be the case that the claim is referring to simultaneous communication using multiple antennas. The claim also contemplates using a single "wireless transmit and receive components," so it cannot be the case that the claim is referring to using multiple wireless transmit and receive components or units at the same time. Dependent claim 15 of the '653 patent also recites elsewhere sending data and

receiving data at the same time, so it cannot be the case that the claims are referring to sending data and receiving simultaneously: This claim requires "simultaneous communication paths" between a server and a device.

99. The intrinsic record does not clarify the meaning of the limitation "using one [] antenna simultaneously." The patents do not describe a scenario where one antenna is used for some sort of "simultaneous" communication. To the contrary, the patents include examples of simultaneous communications, but only where the device is using multiple transmit and receive units *and* multiple antennas. For example, column 6, lines 26-29 of the '653 patent recites "The multiple T/R units and antennas 710 allow multiple simultaneous communication paths over connection 704 between the CT/MD and the Server C such that the communication rate is increased." At no point does the specification explain what it means to use T/R unit and one antenna simultaneously.

100. Therefore, in my opinion, the phrases "wherein the first wireless transmit and receive component is enabled to communicate using one or more antennas simultaneously" and "wherein the first wireless transmit and receive unit is enabled to communicate using one or more antennas simultaneously" are indefinite.

## VII. CONCLUSION

101. For all these reasons, in my opinion, a POSITA would not be able to determine the full scope of the claim languages, identified above, with reasonable certainty. Therefore, in my opinion, the terms and phrases identified above are indefinite.

## VIII. RESERVATION TO SUPPLEMENT OR AMEND

102. The analyses and conclusions presented herein are based on the evidence available to me at this time. I reserve the right to supplement or amend the opinions I have expressed, for example, as a result of opinions expressed by other experts in this matter.

103. Additionally, it is my understanding that discovery is ongoing in this matter. I therefore reserve the right to rely on additional discovery that occurs after this declaration is submitted. To the extent that additional information becomes available relevant to the opinions expressed in this declaration, I will update my opinions as appropriate.

104. If asked to testify at a hearing, I may use and rely on visual aids and/or demonstrative exhibits. Such visual aids and demonstrative exhibits may include claim charts, patent drawings, excerpts from patent specifications, prosecution histories, and other sources, as well as charts, diagrams, and animated or computer-generated video.

# Attachment A

**Dr. Harry V. Bims**
**Protocomm Systems, LLC**
**2665 Marine Parkway, Suite 1140**
**Mountain View, CA 94043**
**harrybims@me.com**
**650-283-4174**

## PROFESSIONAL SUMMARY

Harry Bims, PhD, EE, provides expert witness support services for telecommunications-related intellectual property litigation. These services include deposition and court testimony, expert reports, and infringement research, for patent, copyright, and trade secret litigation matters. He has 30+ years of telecommunications industry experience, and holds twenty-two US patents in network architecture and chip design for wireless communications.

## EMPLOYMENT HISTORY

12/2001 - 05/2004 **AirFlow Networks, Inc. LLC ● Sunnyvale, California**

Position: *CEO/CTO & Founder*

As the sole founder of the company, created the original business plan, raised venture capital, and hired the core engineering team. Grew the company to 32 people and shipped products for revenue in the US and overseas. Fifteen patents on the core technology have issued. These patents, which relate to wireless network infrastructure based on the 802.11 specification, have been sold to Broadcom.

03/2001 - 12/2001 **Bay Partners LLC ● Cupertino, California**

Position: *Entrepreneur in Residence*

Reported to the partners of this VC firm as a technology expert on a range of wireless and networking subjects. Reviewed business plans and participated in due diligence activities related to several startups seeking funding. Developed a business plan for a startup that builds network infrastructure for 802.11 enterprise networks.

09/1999 - 03/2001 **Symmetry Communications Systems LLC ● San Jose, California**

Position: *Director, Software Architecture*

Reporting to the CEO, responsible for the software architecture of their core SGSN and GGSN products for the GPRS market. Formulated a software technology roadmap, showing the evolution from 2.5G to 3G SGSN and GGSN products. Management responsibility for Firmware, Hardware, Performance, and Systems Engineering Groups. Provided management support of early field trials of the system on a global basis.

07/1999 - 09/1999 **T-SPAN Systems Corporation LLC ● Palo Alto, California**

Position: *Member of Technical Staff*

Designed a wireless home LAN protocol for the company. Also designed and built a PC-based platform to demonstrate their technology. Company is now publicly traded as Atheros Communications.

07/1992 - 12/1998 **Glenayre Technologies-Wireless Access Group ● San Jose, California**

Position: *Member of Technical Staff; Sr. Member of Technical Staff; Manager of NOC Systems*

Employee #6 at the company, which was acquired by Glenayre Technologies, Nov 1997. Designed and built a 4-channel ReFLEX50 pager demonstration in 1 week. Participated in early field trials and feasibility studies, culminating in a Pioneer's Preference license award from the FCC to SkyTel Corporation for Narrowband PCS development.

Invented, designed, and built from concept through full implementation, a patented two-way pager test system for the ReFLEX50 and ReFLEX25 protocols. This system was used throughout company operations for performance testing of the ReFLEX pager designs from Wireless Access, and Motorola. Over 16 systems were deployed around the country for manufacturing tests, engineering protocol tests, antenna tests, and pager repair tests.

The project required technical skills in PC hardware design, C++, object-oriented programming, signal processing techniques, NT device driver development, Win32 user interface development, real-time, multi-threaded control, and proficiency with wireless communications lab equipment. Three patents have been issued based on technical inventions in this capacity.

Co-developed a wireless application protocol for sending and receiving encrypted email messages over the paging channel. Led the project team that deployed a software encryption module based on this protocol for government agencies.

8/2018 – Present **CUPP Cybersecurity, LLC ● Palo Alto, California**

Position: *CEO*

Developing a suite of network security products and technologies aimed at consumers to protect their online internet access.

10/2012 – Present **BoughtStuff, Inc ● Palo Alto, California**

Position: *Founder*

The company has developed a mobile application for storage and delivery of product information to smartphones over wireless networks.

## Bims Laboratories, LLC Work History

6/2009 – 7/2009 **Eastman Kodak Company ● Rochester, NY**

Position: *Technology Consultant*

Providing technology assessment on certain wireless communication patents.

10/2009 – 1/2017 **IEEE 802.16 Working Group**

Position: *Task Group Secretary, Task Group Vice-Chair, Task Group Chair, Working Group Vice-Chair & Secretary, IEEE 802.16 Expert*

Served in several leadership capacities within this group that is working on improvements to the IEEE 802.16 standard, otherwise known as WiMAX. The 802.16 Working Group entered hibernation on March 2018. From that time until the present, I am on the roster of Experts designated by the Chair to answer questions and provide clarification about the 802.16 standards.

2/2014 – Present **Access Network Protocol Development**

Position: *Technical Lead Developer*

Developing a C++17-based DES of SDRs for wired and wireless network protocols, that includes IMT-2020 channel models. Implementations of the IEEE 802 and LTE protocol families, plus PTP, PPoE, IPv6, digital cable, Bluetooth, DSL, frame relay and many other managed node models for smart grid and vertical IoT applications. Used for technical analysis of emerging wireless standards amendments.

## Protocomm Systems, LLC Consulting History

04/1999–07/1999 **Gigabit Wireless, Inc. ● San Jose, California**

Position: *Technical Leader*

Technical leader for the Wireless MAC design group. Responsible for comparative analysis of competing wireless MAC protocol standards. Responsible for the creation of a proprietary MAC protocol specification document, simulation of the protocol, and implementation in a prototype. Participated in early 802.16 protocol standards. This company was acquired by Intel Corporation.

3/2007 – 10/2009 **Apple, Inc. ● Cupertino, CA**

Position: *Technology Consultant*

Participating in IEEE 802.16 standards meetings as an affiliate of the client.

7/2003 – Present **Various expert witness engagements (see below)**

Position: *Technical Expert Witness*

Testified as a wireless technology expert in patent infringement cases. For a list of such cases, see below.

## Technical Expert Witness Experience

2/2022 – Present **Client: Fish & Richardson LLP (representing Apple, Inc.)**

Case: Litigation between Ericsson and Apple in Belgium, Brazil, Germany, Netherlands, and Colombia, and US matters:

Ericsson Inc. et. al. v. Apple Inc., Civil Action No. 6:22-cv-00061-ADA

Ericsson Inc., et. al, v. Apple Inc., Civil Action No. 2:21-cv-00376

Apple Inc. v. Telefonaktiebolaget LM Ericsson, et. al., Civil Action No. 2:21-cv-00460

In the Matter of Certain Mobile Phones Tablet Computers, Smart Watches, Smart Speakers, and Digital Media Players, and Products Containing Same.

U.S. Int'l Trade Commission Inv. No. 337-TA-3596

Location: UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF TEXAS WACO DIVISION – Hon. Alan D. Albright

UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS

UNITED STATES INTERNATIONAL TRADE COMMISSION

Testifying expert in these matters involving 5G networking technology.

Expert Declaration:

May 18, 2022 COLOMBIA: Invalidity and Non-Infringement Technical Opinion regarding certain Colombia patents

April 27, 2022 COLOMBIA: Invalidity and Non-Infringement Technical Opinion regarding certain Colombia patents #1

April 27, 2022 COLOMBIA: Invalidity and Non-Infringement Technical Opinion regarding certain Colombia patents #2

March 28, 2022 COLOMBIA: Invalidity and Non-Infringement Technical Opinion regarding certain Colombia patents

March 9, 2022 BRAZIL: Invalidity Technical Opinion regarding Brazil patents

May 17, 2022 BRAZIL: Invalidity and Non-Infringement Technical Opinion in response to Ericsson statement

Attorneys: For Plaintiff:

For Defendant: Stroock, LLP

Status: Case ongoing

1/2022 – Present **Client: Stroock LLP (representing TrackThings LLC)**

Case: TrackThings LLC v. NETGEAR, Inc.; TrackThings LLC v. NETGEAR, Inc.; TrackThings LLC v. Amazon.com, Inc. and Amazon.com Services LLC, and eero LLC., Civil Action No. 6:21-cv-00720. – Hon. Alan D. Albright

Location: UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF TEXAS WACO DIVISION

Testifying expert in this District Court matter involving wireless network reconfiguration.

Expert Declaration:

March 10, 2022 Declaration in support of claim construction responses

Attorneys: For Plaintiff:

For Defendant: Stroock, LLP

Status: Case ongoing

12/2021 – Present **Client: Axinn Veltrop & Harkrider LLP (representing Samsung Electronics Co., Ltd)**

Case: TOT Power Control, S.L. v. Samsung Elecs. Co., Ltd and Samsung Elecs. Am. Inc., Civil Action No. 1:21-cv-01305.

Location: UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE

Testifying expert in this District Court matter involving power control methods in wireless systems.

Attorneys: For Plaintiff:

For Defendant: Axinn, LLP

Status: Case ongoing

10/2021 – Present **Client: Wilkie Farr & Gallagher LLP (representing Lenovo and Motorola)**

Case: IPR Petitions relating to Bell Northern Research, LLC. v. Lenovo Group, Ltd., Lenovo (United States) Inc., and Motorola Mobility LLC, Civil Action No. 6:21-cv-00847

Location: UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD

Testifying expert in this IPR proceeding case involving training sequences in wireless networks.

Status: Case ongoing

10/2021 – 5/2022 **Client: Finnegan, Henderson, Farabow, Garrett & Dunner, LLP (representing MediaTek Inc.)**

Case: NXP USA, Inc. v. MediaTek Inc., et. al., Civil Action No. 2:21-cv-000318-JRG – Hon. Rodney Gilstrap

Location: UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS MARSHALL DIVISION

Testifying expert in this District Court matter involving 802.11 chipsets.

Attorneys: For Plaintiff: Duane Morris, LLP

For Defendant: Finnegan, LLP

Status: Case settled

09/2021 – Present **Client: Fish & Richardson, LLP (representing Samsung Electronics Co., Ltd., et. al.)**

Case: Smart Mobile Technologies, LLC v. Samsung Electronics Co., Ltd., et. al., Civil Action No. 6:21-cv-00701-ADA. Hon. Alan D. Albright

Location: UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF TEXAS WACO DIVISION

Testifying expert in this District Court matter involving wireless voice and data transfer.

Attorneys: For Plaintiff: Hagens Berman Sobol Shapiro, LLP

For Defendant: Fish & Richardson, LLP

Status: Case ongoing

05/2021 – Present **Client: Sidley Austin (representing HP Inc. and Microsoft Corporation)**

Case: SynKloud Technologies, LLC v. HP Inc., Civil Action No. 1:19-cv-01360-RGA and Microsoft Corporation v. SynKloud Technologies, LLC, Civil Action No. 1:20-cv-00007-RGA

Location: UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE

Testifying expert in this District Court matter involving wireless cloud storage.

Expert Report:

June 25, 2021 Declaration ISO Microsoft and HP's Claim Construction Brief

Expert Testimony:

Attorneys: For Plaintiff:

For Defendant: Sidley Austin

Status: Case ongoing

05/2021 – Present **Client: DLA Piper (representing Motorola Mobility LLC)**

Case: U.S. Int'l Trade Commission Inv. No. 337-TA-1253

Certain LTE-Compliant Cellular Communication Devices

Motorola v. Evolved Wireless LLC.

Location: UNITED STATES INTERNATIONAL TRADE COMMISSION – Administrative Law Judge Cameron R. Elliot

Testifying expert in this ITC matter involving LTE cellular device handover.

Expert Report:

November 16, 2021 Expert Report on NonInfringement and Lack of Technical Domestic Industry

Expert Testimony:

December 15, 2021 Deposition testimony

Attorneys: For Plaintiff: Nelson Bumgardner Albritton P.C.; Adduci, Mastriani & Schaumberg, LLP

For Defendant: DLA Piper

Status: Case ongoing

04/2021 – Present **Client: Desmarais LLP (representing Google LLC and FitBit Inc.)**

Case: Cellspin Soft, Inc. v. Fitbit, Inc., No. 4-17-cv-05928-YGR

Location: UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA

Hon. Yvonne Gonzalez Rogers

Testifying expert in this patent case involving the distribution of real-time health data.

Expert Testimony:

October 29, 2021 Expert Report on NonInfringement

Attorneys: For Plaintiff: Garteiser Honea PLLC and Corcoran IP Law PLLC

For Defendant: Desmarais LLP

Status: Case ongoing

03/2021 – Present **Client: Fish & Richardson LLP (representing Samsung Electronics Co., Ltd, and Samsung Electronics America, Inc.)**

Case: Ericsson Inc., and Telefonaktiebolaget LM Ericsson v. Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc.

U.S. Int'l Trade Commission Inv. No. 337-TA-1248

Certain Cellular Communications Infrastructure Systems, Components Thereof, and Products Containing Same

Location: UNITED STATES INTERNATIONAL TRADE COMMISSION

Testifying expert in this ITC matter involving cellular networking.

Attorneys: For Plaintiff:

For Defendant: Fish & Richardson LLP

Status: Case ongoing

02/2021 – Present **Client: Fish & Richardson (representing Quectel)**

**Client: Axinn, Veltrop & Harkrider LLP (representing Thales DIS AIS USA, LLC)**

**Client: Pearl Cohen LLP (representing Telit)**

Case: U.S. Int'l Trade Commission Inv. No. 337-TA-1240

Certain UMTS and LTE Cellular Communication Modules and Products Containing the Same

Koninklijke Philips N.V. v Quectel Wireless Solutions Co. Ltd., Thales DIS AIS Deutschland GmbH, Thales S.A., Telit Wireless Solutions, Inc., Telit Communications PLC, CalAmp Corp, Xirgo Technologies, LLC, Laird Connectivity, Inc., Thales DIS AIS USA LLC

Case No. 1:20-cv-1713 (D. Del)

Location: UNITED STATES INTERNATIONAL TRADE COMMISSION – Administrative Law Judge Hon. David P. Shaw

Testifying expert on 3GPP mobile device operation.

Expert Testimony:

| | |
|---|---|
| July 21, 2021 | Expert Report on Invalidity |
| August 6, 2021 | Deposition Testimony |
| October 12, 2021 | Live Testimony before ALJ David P. Shaw |

Attorneys: For Plaintiff: Mayer Brown LLP

For Defendants: Fish & Richardson; Axinn, Veltrop & Harkrider LLP

Status: Case closed

11/2020– Present **Client: Orrick, Herrington & Sutcliffe LLP (representing PayPal Holdings, Inc.)**

Case: IOENGINE LLC v PayPal Holdings, Inc.

Civil Action No. 1:18-cv-00452-WCB

Location: UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE

Hon. William C. Bryson

Testifying expert in this patent case involving peripheral device communication to remote servers.

Expert Report:

November 19, 2021 Expert Report on Invalidity

January 7, 2022 Expert Report on Non-Infringement

January 20-21, 2022 Deposition Testimony on Invalidity and Non-Infringement

Status: Case ongoing

11/2020 – Present **Client: Holland & Knight (representing Apple, Inc.)**

Case: Maxell v. Apple Inc. In the Matter of Certain Mobile Electronic Devices and Laptop Computers

U.S. Int'l Trade Commission Inv. No. 337-TA-1215

Location: UNITED STATES INTERNATIONAL TRADE COMMISSION – Administrative Law Judge Hon. Dee Lord

Testifying expert on 3GPP mobile device operation.

Expert Report:

February 24, 2020: Opening Expert Report Regarding Invalidity

Attorneys: For Plaintiff: Mayer Brown LLP

For Defendant: DLA Piper LLP

Status: Case ongoing

9/2020– 9/2021 **Client: DickinsonWright (representing Nippon Telegraph & Telephone Co. and Essential WiFi, LLC)**

Case: NTT Corp., et. al. v. MediaTek, Acer, and Texas Instruments

Civil Action No. 1:20-cv-00632-ADA. Hon. Alan D. Albright

Location: UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF TEXAS AUSTIN DIVISION – Hon. Alan Albright

Testifying expert in this patent case involving MIMO technology.

Expert Reports:

Status: Case closed

8/2020– Present **Client: Folio Law Group PLLC (representing Dali Wireless)**

Case: Dali Wireless, Inc. v. Corning Optical Communications, LLC,

Civil Action No. 3:20-cv-06469-EMC

Location: UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF TEXAS – Hon. Edward M. Chen

Testifying expert in this patent case involving distributed antenna system networks.

Expert Reports:

November 6, 2020: Declaration Regarding Interpretation of Asserted Claims

February 12, 2021: Declaration Regarding Interpretation of Asserted Claims

Status: Case ongoing

3/2020– Present **Client: Folio Law Group PLLC (representing Dali Wireless)**

Case: Dali Wireless, Inc. v. CommScope Technologies, LLC and CommScope Holding Company, Inc..

Civil Action No. 1:19-cv-00952-MN

Location: UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE – Hon. Maryellen Noreika

Testifying expert in this patent case involving distributed antenna system networks.

Expert Reports:

June 23, 2021: Expert report on infringement.

August 16, 2021: Reply Expert report on infringement of ’338 Patent

Status: Case ongoing

03/2020 – Present **Client: Sidley Austin LLP (representing Lenovo and Motorola)**

Case: InterDigital Technology Corporation, IPR Licensing, Inc., InterDigital Communications, Inc., InterDigital Holdings, Inc., and InterDigital, Inc. v. Lenovo Holding Company, Inc., Lenovo (United States) Inc., and Motorola Mobility LLC

Civil Action No. 19-1590-LPS

Location: UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE

Hon. Leonard P. Stark

Testifying expert in this patent case involving 3G and 4G cellular standards.

Expert Reports:

Status: Case ongoing

3/2020– Present **Client: Finnegan, Henderson, Farabow, Garrett & Dunner LLC (representing Google)**

Case: Google, Inc. (Petitioner) v. Sonos, Inc.

Location: UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD

Testifying expert in this IPR proceeding involving wireless home speaker systems.

Expert Declarations:

February 22, 2021: Filed declarations in support of Inter Partes Review.

Status: Case ongoing

08/2019 – Present **Client: Fish & Richardson (representing Finjan, Inc.)**

Case: Finjan, Inc. v. Cisco, Inc.

Civil Action No. 5:17-cv-00072-BLF-SVK

Location: UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF CALIFORNIA SAN DIEGO DIVISION – Hon. Susan Van Keulen

As a testifying expert, provided a technology tutorial in this patent case involving internet security technology.

Expert Declaration:

August 14, 2019 Tutorial expert report on network security technology.

September 4, 2019 Deposition Testimony

Attorneys: For Plaintiff: Fish & Richardson

For Defendant:

Status: Case ongoing

8/2019 – 5/2020 **Client: Fish & Richardson (representing LG Electronics, Inc.)**

Case: Bell Northern Research, LLC v. LG Electronics, Inc., et. al.

USDC-SDCA Civil Action No. 18-cv-2864-CAB-BLM

Location: UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF CALIFORNIA – Hon. Cathy Ann Bencivengo, Magistrate Judge: Hon. Barbara L. Major

Testifying expert on wired/wireless communication in gaming systems.

Expert Report:

November 20, 2019 Declaration ISO motion for summary judgment

Attorneys: For Plaintiff: Skiermont Derby LLP

For Defendant: Fish & Richardson

Status: Case closed

7/2019 – 05/2021 **Client: O'Melveny & Myers LLP (representing Apple Inc.)**

Case: Maxell, Ltd. v. Apple Inc.,

Case No. 5:19-cv-00036-RWS.

Location: UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS TEXARKANA DIVISION – Hon. Robert W. Schroeder III

Testifying expert on 3G cellular telephone technology.

Expert Reports:

May 7, 2020: Opening Expert Report Regarding Invalidity

June 4, 2020: Rebuttal Expert Report on Non-Infringement

Deposition Testimony: June 24, 2020

Attorneys: For Plaintiff: Mayer Brown LLP

For Defendant: O'Melveny & Myers LLP

Status: Case settled.

4/2019 – Present **Client: Perkins Coie (representing Nintendo of America, Inc.)**

Case: Genuine Enabling Technology LLC v. Nintendo Company Ltd., and Nintendo of America, Inc., W.D. Wash.,

Civil Action No. 2:19-cv-00351-RSM

Location: UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF WASHINGTON – Hon. Ricardo S. Martinez

Testifying expert on wired/wireless communication in gaming systems.

Expert Declarations:

October 23, 2019 Declaration ISO claim constructions

November 26, 2019 Sur-reply declaration ISO claim constructions

January 23, 2020 Declaration ISO motion for summary judgment

April 20, 2020 Opening Expert Report Regarding Invalidity

Expert Depositions:

December 19, 2019

Claim Construction Hearing Testimony:

February 24, 2020 Tutorial testimony on the technology of the Asserted Patents

Attorneys: For Plaintiff: Bayard, P.A.

For Defendant: Perkins Coie

Status: Case closed

12/2019 – 12/2019 **Client: Erise IP (representing Apple Inc.), Haynes and Boone, LLP (representing Ericsson Inc)**

Case: Ericsson Inc. (Petitioner) v. Uniloc 2017, LLC (Patent Owner)

Apple Inc. (Petitioner) v. Uniloc 2017, LLC (Patent Owner) Case No. IPR2020-00224

Location: UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD

Testifying expert in this IPR proceeding involving ARQ data exchange on LTE networks.

Expert Declarations:

December 16, 2019 Declaration ISO Petition for Inter Partes Review of U. S. Patent No. 7,075,917

Attorneys: For Petitioner: Erise IP; Haynes and Boone, LLP

For Patent Owner:

Status: Case closed

6/2019 – Present **Client: Fish & Richardson (representing Microsoft Corporation)**

Case: Microsoft Corp. (Petitioner) v. Uniloc 2017, LLC (Patent Owner)

Uniloc 2017, LLC v. Microsoft Corp.

USDC Central District of California, Case Nos. 8:18-cv-2053, 8:18-cv-2054, 8:18-cv-2224; 8:19-cv-0428, 8:19-cv-0477, 8:19-cv-0196

Location: UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD

Testifying expert in this IPR procedding involving 3GPP transport formats and channels.

Expert Declarations:

August 6, 2019 Declaration in support of claim construction

Attorneys: For Plaintiff: Feinberg Day LLP

For Defendant: Fish & Richardson

Status: Case ongoing

2/2019 – 5/2020 **Client: Klarquist Sparkman, LLP (representing Microsoft Corporation)**

Case: Uniloc 2017, LLC v. Microsoft Corp.

Location: UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD

Testifying expert in this IPR proceeding involving ARQ data exchange on LTE networks.

Expert Declarations:

April 14, 2019 Declaration ISO Petition for Inter Partes Review of U. S. Patent No. 7,075,917

Attorneys: For Plaintiff:

For Defendant: Klarquist LLP

Status: Case ongoing

10/2018 – Present **Client: Kramer Levin Naftalis & Frankel, LLP (representing Finjan, Inc.)**

Case: Finjan, Inc. v. Eset, Inc.

Civil Action No. 3:17-cv-00183-CAB-BGS

Location: UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF CALIFORNIA SAN DIEGO DIVISION – Hon. Cathy Ann Bencivengo

As a testifying expert, provided a technology tutorial in this patent case involving internet security technology.

Expert Declaration:

October 5, 2018 Tutorial expert report on network security technology.

March 11, 2020 Jury trial testimony.

Attorneys: For Plaintiff: Kramer Levin, Naftalis, & Frankel LLP

For Defendant:

Status: Jury Trial Mistrial due to COVID-19.

Case ongoing

9/2018 – Present **Client: Kramer Levin Naftalis & Frankel, LLP (representing Finjan, Inc.)**

Case: Finjan, Inc. v. Juniper, Inc.

Civil Action No. 15-cv-03295-BLF-SVK

Location: UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA SAN JOSE DIVISION – Hon. Beth L. Freeman

As a testifying expert, provided a technology tutorial in this patent case involving internet security technology.

Expert Declaration:

September, 11, 2018 Tutorial expert report on network security technology.

Videotaped Deposition:

November 7, 2018

Attorneys: For Plaintiff: Kramer Levin, Naftalis, & Frankel LLP

For Defendant:

Status: Case closed

9/2017 – 9/2018 **Client: (Covington & Burling representing Huawei Device USA, Inc.)**

Case: Optis Wireless Technology, LLC, et. al. v. Huawei Technologies Co. Ltd, et. al.

Civil Action No. 2:17-cv-123-JRG-RSP

Location: UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS MARSHALL DIVISION – Hon. Roy S. Payne

Testifying expert regarding 3G and LTE technology.

Expert Declarations and Reports:

November 3, 2017: Declaration regarding Claim Construction.

March 26, 2018: Initial Expert Report Regarding Invalidity

April 23, 2018: Rebuttal Expert Report on Non-Infringement

April 27, 2018: Rebuttal Expert Report on Secondary Considerations

Videotaped Deposition: May 10, 2018

May 14, 2018: Declaration in support of Motion for Partial Summary Judgment

Jury Trial Testimony: August 22, 2018 and August 23, 2018

Attorneys: For Plaintiff: McKool Smith

For Defendant: Covington & Burling

Status: Jury award

6/2017 – 4/2018 **Client: Kramer Levin Naftalis & Frankel, LLP (representing Finjan, Inc.)**

Case: Finjan, Inc. v. Symantec, Inc.

Civil Action No. 4:14-cv-02998-HSG

Location: UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA OAKLAND DIVISION

As a testifying expert, provided a technology tutorial in this patent case involving internet security technology.

Expert Declaration:

July 27, 2017 Tutorial expert report on security technology.

Videotaped Deposition:

August 29, 2017

Attorneys: For Plaintiff: Kramer Levin, Naftalis, & Frankel LLP

For Defendant: Quinn Emmanuel

Status: Case settled

5/2017 – 3/2018 **Client: Barnes & Thornburg, LLP (representing Ooma, Inc.)**

Case: Ooma, Inc. (Petitioner) v. Deep Green Wireless, LLC (Patent Owner)

Location: UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD

As a testifying expert, provided a technology tutorial in this patent case involving voice and data communications over wireless networks.

Expert Declaration:

June 8, 2017 Expert report on prior art wireless network technology.

Videotaped Deposition:

February 15, 2018

Attorneys: For Petitioner: Barnes & Thornburg LLP

For Defendant: Mischcon De Reya New York, LLP

Status: Case closed

3/2017 – 6/2019 **Client: Fish & Richardson (representing Apple, Inc.) / Gibson, Dunn & Crutcher LLP (representing Compal Electronics, et. al.)**

Case: Apple Inc. v. Qualcomm Inc.

Qualcomm Inc. v. Compal Electronics, Inc., et. al.

Civil Action No. 3:17-cv-00108 / Civil Action No. 3:17-cv-01010

Location: UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF CALIFORNIA – Hon. Gonzalo P. Curiel, Magistrate Judge: Hon. Mitchell D. Dembin

Testifying expert regarding LTE technology.

Expert Declaration:

December 11, 2017: Declaration regarding Claim Construction.

Expert Report:

June 29, 2018: Opening Expert Report regarding invalidity

August 3, 2018: Expert Report on infringement

October 2, 2018: Rebuttal Expert Report on Invalidity

Videotaped Deposition:

October 25, 2018

None

Attorneys: For Apple: Fish & Richardson

For Qualcomm: Quinn Emanuel Urquhart & Sullivan LLP / Cravath, Swaine & Moore LLP

For Compal Electronics, Inc., et. al: Gibson, Dunn & Crutcher LLP

Status: Case settled.

3/2017 – 1/2018 **Client: Kramer Levin Naftalis & Frankel, LLP (representing Finjan, Inc.)**

Case: Finjan, Inc. v. Blue Coat Systems, LLC

Civil Action No. 15-cv-03295-BLF-SVK

Location: UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA SAN JOSE DIVISION – Hon. Beth L. Freeman

As a testifying expert, provided an opening technology tutorial at trial in this patent case involving internet security technology.

Expert Declaration:

March 29, 2017 Tutorial expert report on security technology.

Videotaped Deposition:

May 2, 2017

October 31 – November 2, 2017: Jury Trial Testimony

January 8-10, 2018: Jury Trial Testimony (retrial after mistrial):

Live Testimony on Network Security Technology Tutorial

Attorneys: For Plaintiff: Kramer Levin, Naftalis, & Frankel LLP

For Defendant: Morrison & Forrester & Quinn Emmanuel

Status: Jury award

1/2017 – 7/2017 **Client: Foster Pepper LLP (representing Dali Wireless)**

Case: Dali Wireless, Inc. (Petitioner) v. CommScope Technologies, LLC (Patent Owner)

Location: UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD

Testifying expert in this patent case involving RF transport networks.

Expert Reports:

4-26-17 Declaration ISO petition for IPR

6-30-17 Declaration ISO Opening claim construction brief

Videotaped Deposition:

July 24, 2017

Status: Case closed

1/2017 – 6/2019 **Client: Dorsey & Whitney LLP (representing Dali Wireless)**

Case: CommScope Technologies, LLC (Plaintiff/Counterclaim Defendant) v. Dali Wireless, Inc. (Defendant/Counterclaim Plaintiff)

Civil Action No.: 3:16-cv-477

Location: UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF TEXAS DALLAS DIVISION – Hon. Barbara M. G. Lynn

Testifying expert in this patent case involving RF transport networks.

Expert Reports:

8-24-18 Expert Report regarding Invalidity of CommScope patents

8-24-18 Expert Report regarding Infringement of Dali Wireless patents

11-5-18 Expert Report regarding Validity of Dali Wireless patents

11-5-18 Expert Report regarding Non-Infringement of CommScope patents

1-9-19 Declaration ISO opposition to MSJ

1-18-19 Declaration ISO partial MSJ on Non-infringement and Invalidity

5-2-19 Declaration ISO Motion for Sanctions

Videotaped Deposition:

November 20, 2018

Live Testimony at Jury Trial:

June 10-13, 2019

Attorneys: For Plaintiff: Dorsey & Whitney, LLC

For Defendant: Carlson Caspers, P.A.

Status: Jury award.

11/2016 – 4/2019 **Client: Boies, Schiller & Flexner LLP (representing Apple Inc.)**

Case: Evolved Wireless, LLC v. Apple, Inc.

Civil Action No.: 1:15-cv-00542-SLR

Location: UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE – Hon. Sue L. Robinson

Testifying expert in this patent case involving LTE wireless networks.

Expert Reports:

11-06-17 Declaration ISO Summary Judgment of Validity

10-05-17 Declaration ISO Summary Judgment of Non-Infringment

10-03-17 Supplemental Expert Report on Non-Infringement

07-24-17 Supplemental Expert Report on Secondary Considerations of Non-Obviousness

6-26-17 Expert Report on Non-Infringement

5-22-17 Expert Report on Invalidity

Videotaped Deposition:

August 11, 2017

Live Testimony at Jury Trial:

March 29 - April 1, 2019

Attorneys: For Plaintiff: Boies, Schiller & Flexner LLP

For Defendant: Robins Kaplan LLP

Status: Jury verdict of non-infringement.

7/2016 – 4/2018 **Client: Jackson Walker LLP (representing D&M Holdings, Inc., *et. al.*)**

Case: Sonos, Inc., v. D&M Holdings, d/b/a The D+M Group, D&M Holdings U.S. Inc., and Denon Electronics (USA), LLC

Civil Action No.: 14-1330-RGA

Location: UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE – Hon. Richard G. Andrews

Testifying expert in this patent case involving wireless speaker networks.

Expert Reports:

4-17-17 Expert Report on Non-Infringement

Videotaped Deposition:

February 7, 2017 and February 8, 2017

Jury Trial, December 11-15, 2017:

Live Testimony at Jury Trial on Non-infringement

March 15, 2018: Post-trial Declaration

Attorneys: For Plaintiff: Potter Anderson & Corroon LLP

For Defendant: Jackson Walker LLP

Status: Jury Award

7/2016 – 1/2018 **Client: Kramer Levin Naftalis & Frankel, LLP (representing Finjan, Inc.)**

Case: Palo Alto Networks, Inc. (Petitioner) v. Finjan, Inc. (Patent Owner)

Case IPR2015-02001, Case IPR2016-00157. US Patent No. 8,225,408 B2

Case IPR2015-01974

Location: UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD

Testifying expert in this patent case involving wireless speaker networks.

Expert Declaration:

8-9-16 Expert Declaration, Patent 7,647,633

8-9-16 Expert Declaration, Patent 8,225,408

8-30-16 Supplemental Expert Declaration, 7,647,633

Status: Case settled

5/2016 – 7/2018 **Client: (Winston & Strawn LLP representing Atlantic Broadband Group, LLC, et. al.)**

Case: ChanBond LLC v. Atlantic Broadband Group, LLC, et. al.

Civil Action No: 15-842-RGA, 15-843-RGA, 15-844-RGA, , 15-845-RGA, , 15-846-RGA, , 15-847-RGA, , 15-848-RGA, , 15-849-RGA, , 15-850-RGA, , 15-851-RGA, , 15-852-RGA, , 15-853-RGA, , 15-854-RGA

Location: UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE – Hon. Richard G. Andrews

Testifying expert regarding digital cable technology.

Expert Report:

10-24-17 Expert Report on Invalidity

Videotaped Deposition:

None

Attorneys: For Plaintiff: Bayard, P.A.

For Defendant: Winston & Strawn LLP

Status: Case settled

5/2016 – 11/2019 **Client: (Torys LLP representing Telus, Bell, and Rogers)**

Case: Wi-LAN Inc. v Telus Communications Company, Rogers Communications Canada Inc., and Bell Mobility Inc.

Court File No. T-301-16; Court File No. T-303-16; Court File No. T-304-16

Location: CANADIAN FEDERAL COURT – Hon. Mandy Aylen

Testifying expert regarding LTE technology.

Expert Report:

June 14, 2019 Expert Report regarding invalidity

Videotaped Deposition:

None

Attorneys: For Plaintiff: Torys LLP

For Defendant:

Status: Case settled

12/2015 – 4/2016 **Client: Kramer Levin Naftalis & Frankel, LLP (representing Acceleration Bay, LLC.)**

Case: Activision Blizzard, Inc., Electronic Arts Inc., Take-Two Interactive Software, Inc., 2K Sports, Inc., Rockstar Games, Inc., and Bungie, Inc., Petitioner v. Acceleration Bay, LLC, Patent Owner.

Case IPR2015-01951, Case IPR2015-01953, Case IPR2015-01964, Case IPR2015-01970, Case IPR2015-01996, Case IPR2016-00724, Case IPR2016-00747

Location: UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD

Testifying expert in this IPR patent case involving internet data broadcasting.

Expert Declaration:

January 4, 2017 Supplemental Declaration ISO Patent Owner's Response -- Case IPR2016-00724

January 4, 2017 Supplemental Declaration ISO Patent Owner's Response -- Case IPR2016-00747

December 7, 2016 Declaration ISO Patent Owner's Response – Case IPR2016-00724; Secondary Considerations of Non-Obviousness

December 7, 2016 Declaration ISO Patent Owner's Response – Case IPR2016-00747; Secondary Considerations of Non-Obviousness

July 17, 2016 Declaration ISO Patent Owner's Response – Patent 6,714,966; Secondary Considerations of Non-Obviousness

July 17, 2016 Declaration ISO Patent Owner's Response – Patent 6,829,634; Secondary Considerations of Non-Obviousness

July 17, 2016 Declaration ISO Patent Owner's Response – Patent 6,701,344; Secondary Considerations of Non-Obviousness

Videotaped Deposition:

February 7, 2017 and February 8, 2017

Attorneys: For Plaintiff: Kramer Levin, Naftalis, & Frankel LLP

For Defendant: DLA Piper

Status: Case closed

4/2016 – Present **Client: Kramer Levin Naftalis & Frankel, LLP (representing Acceleration Bay, LLC.)**

Case: Acceleration Bay, LLC v Activision Blizzard, Inc., Electronic Arts Inc., Take-Two Interactive Software, Inc.

Civil Action No.: 14-453 (RGA), 16-454 (RGA), 16-455 (RGA)

Location: UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE – Hon. Richard G. Andrews

Testifying expert in this IPR patent case involving internet data broadcasting.

Expert Declaration:

September 24, 2017: Expert Report Regarding Technology Benefits of the

Asserted Patents

Videotaped Deposition: January 4, 2018

July 17, 2018: Reply Report Regarding Technology Benefits of the Asserted Patents

Attorneys: For Plaintiff: Kramer Levin, Naftalis, & Frankel LLP

For Defendant: DLA Piper

Status: Ongoing

12/2015 – 9/2016 **Client: Kramer Levin Naftalis & Frankel, LLP (representing Finjan, Inc.)**

Case: Finjan, Inc. v. Sophos, Inc.

Civil Action No. 3:14-cv-01197-WHO

Location: UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA SAN FRANCISCO DIVISION – Hon. William H. Orrick

As a testifying expert, provided a technology tutorial in this patent case involving internet security technology.

Expert Declaration:

December 21, 2015 Tutorial expert report on network security technology.

Videotaped Deposition:

February 22, 2016

September 5 – 9, 2016 Jury Trial:

Live Testimony at Jury Trial regarding tutorial on network security

Attorneys: For Plaintiff: Kramer Levin, Naftalis, & Frankel LLP

For Defendant: DLA Piper

Status: Jury Trial

9/2015 – 2/2016 **Client: Brinks Gilson & Lione (representing LifeWatch Services, Inc., and Card Guard Scientific Survival, Ltd.)**

Case: Card Guard Scientific Survival Ltd.

Reexam Control No. 12/706,541

Location: UNITED STATES PATENT AND TRADEMARK OFFICE

Provided testimony in this Patent Office re-examination appeal.

Expert Declaration:

November 13, 2015 Declaration under 37 C.F.R §1.132.

February 13, 2016 Declaration ISO petition for IPR.

Attorneys: For Plaintiff: Brinks Gilson & Lione

Status: Re-examination appeal decision invalidated the patent.

9/2015 – 1/2017 **Client: Kramer Levin Naftalis & Frankel, LLP (representing Finjan, Inc.)**

Case: Finjan, Inc. v. Proofpoint, Inc. and Armorize Technologies, Inc.

Civil Action No. 13:cv-03999-BLF

Location: UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA SAN JOSE DIVISION – Hon. Howard R. Lloyd, Hon. Haywood S. Gilliam, Jr.

As a testifying expert, provided an opening technology tutorial report in this patent case involving internet security technology.

Expert Declaration:

October 7, 2015 Tutorial expert report on network security technology.

Videotaped Deposition:

November 6, 2015

Attorneys: For Plaintiff: Kramer Levin, Naftalis, & Frankel LLP

For Defendant: Quinn Emanuel

Status: Case settled

8/2015 – 12/2015 **Client: Brinks Gilson LLP (representing ZTE Corporation and ZTE (USA), Inc.)**

Case: Inter-System Handover of a Mobile Terminal Operable with a First and a Second Radio Access Network

ZTE v. Vringo Infrastructure, Inc.

Location: UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD

Testifying expert in this IPR proceeding involving 3GPP cellular technology.

Expert Declarations:

08-28-15 Declaration ISO Petition for Inter Partes Review of U. S. Patent No. 7,126,940

09-04-15 Declaration ISO Petition for Inter Partes Review of U. S. Patent No. 7,242,943

09-04-15 Declaration ISO Petition for Inter Partes Review of U. S. Patent No. 7,558,283

09-04-15 Declaration ISO Petition for Inter Partes Review of U. S. Patent No. 8,812,000

09-04-15 Declaration ISO Petition for Inter Partes Review of U. S. Patent No. 7,724,720

10-12-15 Declaration ISO Petition for Inter Partes Review of U. S. Patent No. 7,242,933

Videotaped Deposition:

None

Attorneys: For Plaintiff:

For Defendant: Brinks Gilson, LLP

Status: Case settled.

11/2014 – Present **Client: Fish & Richardson (representing Regents of the University of Minnesota)**

Case: Regents of the University of Minnesota v. AT&T Mobility, LLC, Sprint Solutions, Inc., T-Mobile USA, Inc., Cellco Partnership d/b/a Verizon Wireless

Civil Action No. 14-cv-4666

Location: UNITED STATES DISTRICT COURT FOR THE DISTRICT OF MINNESOTA – Hon. Tony N. Leung

Testifying expert on 3GPP error correction coding, precoding, and modulation.

Expert Report:

None.

Attorneys: For Plaintiff: Fish & Richardson

For Defendant:

Status: Case ongoing

10/2014 – 2/2015 **Client: Alston & Bird (representing Microsoft Corporation)**

Case: Microsoft Corporation. v. IPR Licensing, Inc.

Location: UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD

Testifying expert in this IPR proceeding involving cellular technology.

Expert Declarations:

10-16-14 Supplemental Declaration ISO Petition for Inter Partes Review of U. S. Patent No. 8,380,244

Attorneys: For Plaintiff: Alston & Bird LLP

For Defendant:

Status: Case settled

9/2014 – 4/2015 **Client: Reed & Scardino, LLP (representing Mobile Telecommunications Technologies, LLC)**

Case: Mobile Telecommunications Technologies LLC v. Amazon.com, Inc.

Civil Action No. 2:13-CV-883-JRG-RSP

Location: UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS MARSHALL DIVISION – Hon. Roy S. Payne

Testifying expert in this patent case involving package delivery notification systems.

Expert Reports:

4-06-15 Second Supplemental Expert Report on Infringement

2-10-15 Expert Report on Infringement

2-24-15 Supplemental Expert Report on Infringement

Videotaped Deposition:

2-25-15

Declaration:

3-20-15 Declaration ISO Response to Opposition Motion

Attorneys: For Plaintiff: Reed & Scardino LLP

For Defendant: Greenberg Traurig LLP

Status: Case settled

5/2014 – 7/2015 **Client: Kramer Levin Naftalis & Frankel, LLP (representing Finjan, Inc.)**

Case: Finjan, Inc. v. Blue Coat Systems, Inc.

Civil Action No. 3:13-cv-03999-BLF

Location: UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA SAN JOSE DIVISION – Hon. Beth L. Freeman

As a testifying expert, provided an opening technology tutorial at trial in this patent case involving internet security technology.

Expert Declaration:

January 12, 2015 Tutorial expert report on security technology.

Videotaped Deposition:

March 18, 2015

Live Jury Trial Testimony: July 20, 2015.

Live Bench Trial on Laches Testimony: September 8, 2015

Attorneys: For Plaintiff: Kramer Levin, Naftalis, & Frankel LLP

For Defendant: Wilson Sonsini

Status: Jury award.

4/2014 – 12/2014 **Client: Reed & Scardino, LLP (representing Mobile Telecommunications Technologies, LLC)**

Case: Mobile Telecommunications Technologies LLC v. United Parcel Service, Inc.

Civil Action No. 1:12-cv-03222-AT

Location: UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF GEORGIA ATLANTA DIVISION – Hon. Amy Totenberg

Testifying expert in this patent case involving package delivery notification systems.

Expert Reports:

7-3-14 Opening Expert Report regarding Infringement

8-11-14 Rebuttal Expert Report regarding Infringement

Videotaped Depositions:

10-7-14

Declaration:

11-24-14 Declaration ISO Response to MSJ

Attorneys: For Plaintiff: Reed & Scardino LLP

For Defendant: Alston & Bird LLP

Status: Case settled.

12/2013 – 9/2015 **Client: Brinks Gilson & Lione LLP (representing ZTE Corp, and ZTE (USA), Inc.)**

Case: ZTE Corporation and ZTE (USA) Inc. v. InterDigital Technology Corporation

Location: UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD

Testifying expert in this IPR proceeding involving cellular technology.

Expert Declarations:

3-21-14 Declaration in support of the Petition for Inter Partes Review of U. S. Patent No. 8,380,244

Attorneys: For Plaintiff: Brinks Gilson & Lione

For Defendant: Latham & Watkins, LLP

Status: IPR Hearing before PTAB: All disputed claims are unpatentable.

12/2013 – 4/2014 **Client: Kramer Levin Naftalis & Frankel LLP (representing Sirius XM Radio Inc.)**

Case: Catch a Wave Technologies, Inc. v. Sirius XM Radio Inc.

Case No. 3:12-cv-05791-WHA

Location: UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA SAN FRANCISCO DIVISION – Hon. William Alsup

Testifying expert in this patent case involving satellite radio systems.

Expert Reports:

2-14-2014 Expert Report regarding non-infringement

Attorneys: For Plaintiff: Freitas Tseng & Kaufman LLP

For Defendant: Kramer Levin LLP

Status: Case settled

2/2013 – 7/2016 **Client: Reed & Scardino, LLP (representing Mobile Telecommunications Technologies, LLC)**

Case: Mobile Telecommunications Technologies LLC v. BlackBerry Corporation.

Civil Action No. 3:12-cv-1652-M

Location: UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF TEXAS DALLAS DIVISION – Hon. Barbara M. G. Lynn

Testifying expert in this patent case involving package delivery notification systems.

Expert Reports:

9-3-15 Expert Report on Infringement

Videotaped Depositions:

November 18, 2015

Live Testimony at Jury Trial: July 13, 2016.

Attorneys: For Plaintiff: Baker Botts, LLP

For Defendant: Reed & Scardino LLP

Status: Jury verdict of non-infringement.

9/2013 – 1/2014 **Client: Reed & Scardino, LLP (representing Mobile Telecommunications Technologies, LLC)**

Case: Mobile Telecommunications Technologies, LLC v Clearwire Corporation

Civil Action No. 2:12-CV-308

Location: UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS MARSHALL DIVISION – Hon. Roy S. Payne

Testifying expert in this patent case involving wireless networking signals.

Expert Reports:

11-11-13 Rebuttal report regarding validity

Videotaped Depositions:

12-5-13

Declarations:

1-23-14 Declaration before the Patent Trial and Appeal Board in Case IPR2013-00306

Attorneys: For Plaintiff: Reed & Scardino LLP

For Defendant: Shook, Hardy & Bacon, LLP

Status: Case settled

10/2013 – 5/2015 **Client: Foley & Lardner, LLP (representing Motorola Mobility, LLC)**

Case: University of Florida Research Foundation Inc., and Rapid Mobile Technologies, Inc. v Motorola Mobility, LLC.

Case No. 13-cv-61120-KMM-EGT

Location: UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF FLORIDA FORT LAUDERDALE DIVISION – Hon. K. Michael Moore, Magistrate Judge: Hon. Edwin G. Torres

Testifying expert in this patent case involving mobile device testing systems.

Expert Reports:

None.

Declarations:

11-21-13 Declaration ISO Motorola's Responsive Claim Construction Brief

Attorneys: For Plaintiff: Meltzer & Meksraitis

For Defendant: Foley & Lardner LLP

Status: Case settled

7/2013 – 6/2015 **Client: WilmerHale (representing Broadcom)**

Case: Inter Partes Review of US Patent 6,424,625; 6,772,215; and 6,466,568 owned by Ericsson

Docket No. 0111168-0240

Location: UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD

Testifying expert in this Inter Partes Review regarding ARQ mechanisms.

Expert Declarations:

9-19-13 Declaration regarding US Patent 6,772,215

9-19-13 Declaration regarding US Patent 6,466,568

9-29-13 Declaration regarding US Patent 6,424,625

Videotaped Deposition:

5-29-14, and 5-30-14

Attorneys: For Plaintiff: Meltzer & Mathis

For Defendant: Wilmer Cutler Pickering Hale and Dorr LLP

Status: IPR Petition granted. All claims invalidated

4/2013 – 4/2015 **Client: Kilpatrick Townsend & Stockton LLP (representing Google Inc. and Motorola Mobility LLC)**

Case: Fujifilm Corporation v. Motorola Mobility LLC

Case No. 3:12-cv-03587 WHO

Location: UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA SAN FRANCISCO DIVISION – Hon. Richard Seeborg

Testifying expert in this patent case involving smartphone technology.

Expert Declarations:

4-23-14 Declaration ISO Motion for Protective Order

12-9-14 Declaration ISO MSJ

Expert Reports:

10-3-14 Opening Expert Report Regarding Invalidity

10-31-14 Rebuttal Expert Report on non-infringement

10-31-14 Appendix A to Rebuttal Report of Dr. Alan Bovik

Videotaped Deposition:

11-19-14, and 11-20-14

Trial Testimony:

April 28, 2015 Non-infringement and invalidity of ’970 Patent

Attorneys: For Plaintiff: Morgan, Lewis & Bockius LLP

For Defendant: Kilpatrick Townsend & Stockton LLP

Status: Jury verdict: ’970 Patent claims not infringed and invalid.

2/2013 – 10/2013 **Client: Seyfarth Shaw LLP (representing Motorola Mobility LLC)**

Case: University of Florida Research Foundation, Inc. and Rapid Mobile Technologies, Inc. v. Motorola Mobility LLC

Civil Action No. 13-cv-61120-KMM-EGT

Location: UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF FLORIDA – Hon. K. Michael Moore, Magistrate Judge: Hon. Edwin G. Torres

Testifying expert in this employment law case involving mobile device testing systems.

Expert Reports:

3-1-13 Expert Report regarding Non-Infringement

4-1-13 Declaration in Opposition to Plaintiff's MSJ

Attorneys: For Plaintiff: Meltzer & Mathis

For Defendant: Seyfarth Shaw LLP

Status: Case settled

5/2012 – 4/2013 **Client: Paul Hastings LLP (representing Apple, Inc.)**

Case: SmartPhone Technologies, LLC v Research in Motion Corporation, et. al.

Case No. 6:10-cv-00074

Location: UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS TYLER DIVISION – Hon. John D. Love

Testifying expert in this patent case involving 3GPP technology.

Expert Reports:

12-31-12 Appendix A to Rebuttal Expert Report of Dr. David Wilson

3-13-13 Appendix A to Supplemental Expert Report of Dr. David Wilson

Attorneys: For Plaintiff: Mintz Levin Cohn Ferris Glovsky and Popeo PC

For Defendant: Paul Hastings LLP

Status: Case settled

8/2012 – 9/2013 **Client: Reed & Scardino, LLP (representing EON Corp. IP Holdings, LLC)**

Case: EON Corp. IP Holdings, LLC v. SKYGUARD, LLC et. al.

Case No. 6:11-cv-00015-LED

Location: UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF

TEXAS TYLER DIVISION – Hon. John D. Love

Testifying expert in this patent case involving RF technology for WiFi networking.

Expert Reports:

2-15-13 Expert Report regarding Infringement

Videotaped Deposition:

4-09-13

Attorneys: For Plaintiff: Reed & Scardino, LLP

For Defendant: K&L GATES LLP

Status: Case settled

5/2012 – 6/2014 **Client: Reed & Scardino LLP (representing Eon Corp. IP Holdings)**

Case: Eon Corp. IP Holdings, LLC v. Landis+Gyr, Inc., et. al.

Case No. 6:09-cv-00317-LED-JDL

Location: UNITED STATES DISTRICT COURT EASTERN DISTRICT OF TEXAS TYLER DIVISION – Hon. John D. Love

Testifying expert in this patent case involving two-way wireless networks, before Judge Love.

Expert Report:

7-8-13 Expert Report regarding Infringement by Silver Spring Networks, Inc.

7-8-13 Expert Report regarding Infringement by Itron, Inc.

Videotaped Deposition: September 12, 2013

Live Testimony at Jury Trial: June 2, 2014 – June 6-2014

Attorneys: For Plaintiff: Reed & Scardino LLP

For Defendant: Dentons, LLP

Status: Jury award. All patents found valid and infringed.

3/2012 – 3/2014 **Client: Perkins Coie (representing Intel Corporation)**

Case: Stragent LLC, et. al. v. Intel Corp.,

Case No. 6:11-cv-421-LED (E.D. Tex.)

Location: UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS TYLER DIVISION – Hon. Timothy Dyk, Hon. John D. Love

Testifying expert in this patent case involving the use of error detection technology in computer networking, before Judge Dyk.

Expert Reports:

08-23-13 Expert Report regarding Invalidity

09-23-13 Expert Report regarding Non-Infringement

Videotaped Deposition:

10-08-13, and 10-09-13

Jury trial testimony:

3-13-2014 Live trial testimony on non-infringement and invalidity before Judge Timothy Dyk

Attorneys: For Plaintiff: Nelson, Bumgardner & Casto

For Defendant: Perkins Coie

Status: Jury verdict for non-infringement and invalidity

2/2012 – 09/2015 **Client: Dewey & LeBoeuf LLP (representing Harris Corporation)**

Case: Harris Corporation v. Ruckus Wireless, Inc.

Case No. 6:11-cv-00618-CEM-CRS

Location: UNITED STATES DISTRICT COURT FOR THE MIDDLE DISTRICT OF FLORIDA ORLANDO DIVISION – Hon. Charlene Edwards Honeywell

Testifying expert in this patent case involving RF technology for WiFi networking.

Expert Reports:

3-5-12 Expert Report regarding Infringement

3-6-12 Supplemental Expert Report regarding Infringement

4-6-12 Expert Report regarding Validity

Declarations:

5-30-12 Declaration ISO Claim Construction

6-18-12 Declaration ISO Markman Motion

1-23-15 Declaration ISO Responsive Markman Brief

3-6-15 Supplemental Expert Report regarding Infringement

4-3-15 Rebuttal Expert Report regarding Validity

Videotaped Deposition:

4-30-12

Attorneys: For Plaintiff: Dewey & LeBeouf LLP

For Defendant: Lewis and Roca LLP

Status: Case settled

2/2012 – 2/2013 **Client: Common-Interest-Group (representing Nokia, Huawei, ZTE)**

Case: InterDigital Communications LLC, et. al. v. Huawei Tech Co., LTD., et. al.

Certain Wireless Devices With 3G Capabilities and Components Thereof

U.S. Int'l Trade Commission Inv. No. 337-TA-800

Location: UNITED STATES INTERNATIONAL TRADE COMMISSION – Administrative Law Judge Hon. David P. Shaw and Administrative Law Judge Hon. Theodore R. Essex

Testifying expert in this patent case involving 3G wireless, WiFi, and WCDMA technology.

Expert Reports:

11-30-12 Expert Report regarding Non-infringement

7-31-12 Expert Report regarding Invalidity

11-19-10 Rebuttal Expert Report regarding Validity

12-6-10 Supplemental Expert Report regarding Infringement

Videotaped Deposition:

12-14-12, 12-15-12

ITC Trial testimony:

2-6 through 2-15/13 Non-infringement and Invalidity witness statements, live testimony

Attorneys: For Plaintiff: Latham & Watkins, LLP

For Defendant: Alston & Bird, Covington & Burling, Brinks Hofer

Status: ITC hearing verdict: All patents not infringed and invalid

9/2010 – 4/2011 **Client: Reed & Scardino LLP (representing Eon Corp. IP Holdings)**

Case: Eon Corp. IP Holdings, LLC v. Sensus USA, Inc., et. al.

Case No. 6:09-cv-00116-LED-JDL

Location: UNITED STATES DISTRICT COURT EASTERN DISTRICT OF TEXAS

TYLER DIVISION – Hon. John D. Love

Testifying expert in this patent case involving two-way wireless networks

Expert Report:

10-22-10 Expert Report regarding Infringement (Sensus USA, Inc)

11-7-10 Expert Report regarding Infringement (Bell Industries)

11-19-10 Rebuttal Expert Report regarding Validity

12-6-10 Supplemental Expert Report regarding Infringement

Declaration:

12-28-10, 1-18-11

Videotaped Deposition:

12-8-10, 2-3-11

Attorneys: For Plaintiff: Reed & Scardino LLP

For Defendant: Jones Day

Status: Case settled

10/2009 – 2/2010 **Client: White & Case LLP (representing Marvell)**

Case: Marvell Semiconductor, Inc., et. al. v. Commonwealth Scientific Industrial Research Organisation

Case No. 6:07-CV-204 (LED)

Location: UNITED STATES DISTRICT COURT EASTERN DISTRICT OF TEXAS TYLER DIVISION – Hon. Leonard Davis

Testifying expert in this patent case involving wireless LAN protocols.

Expert Report:

11-24-09 Rebuttal Expert Report

Videotaped Deposition:

01-07-10

Attorneys: For Plaintiff: White & Case LLP

For Defendant: Townsend and Townsend and Crew LLP

Status: Case settled

9/2009 – 2/2010 **Client: Perkins Coie Brown & Bain PA (representing Intel)**

Case: Saxon Innovations, LLC v. Apple, Inc., et. al.

Case No. 6:08-cv-00265-LED

Location: UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS TYLER DIVISION – Hon. John D. Love

Testifying expert in this patent case involving wireless technology.

Declarations:

12-04-09 Declaration Regarding Claim Construction

Videotaped Deposition:

01-19-10

Attorneys: For Plaintiff: Susman Godfrey LLP

For Defendant: Perkins Coie Brown & Bain LLP

Status: Case settled

8/2008 – 10/2009 **Client: Reed & Scardino LLP (representing Eon Corp. IP Holdings)**

Case: Eon Corp. IP Holdings, LLC v. Verizon Clinton Center Drive Corp., et. al.

Case No. 6:08-cv-00385

Location: UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS TYLER DIVISION – Hon. John D. Love

Testifying expert in this patent case involving two-way wireless networks

Expert Report:

06-22-10 Expert Report
08-16-10 Supplemental Expert Report

Videotaped Depositions:
08-18-10, 08-26-10

Attorneys: For Plaintiff: Reed & Scardino LLP

For Defendant: Simpson Thacher & Bartlett LLP

Status: Case settled

4/2008 – 3/2009 **Client: McDermott, Will & Emery LLP (representing GE Licensing)**

Case: CIF Licensing, LLC d/b/a GE Licensing v. Agere Systems, Inc.

Case No. 07-170 (JJF)

Location: UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE

– Hon. Joseph. J. Farnan, Jr.

Testifying expert in this patent case involving modem technology.

Expert Report:

09-05-08 Rebuttal Expert Report

Non-videotaped Depositions:
9-24-08, 9-26-08

Jury trial testimony:

2-04-09

Attorneys: For Plaintiff: McDermott, Will & Emery LLP

For Defendant: Townsend and Townsend and Crew LLP

Status: Jury award. 2 patents infringed and valid, remaining 2 patents non-infringed

2/2008 – 5/2010, 2/2011 – 4/2011 **Client: Simpson Thacher & Bartlett LLP (representing Cisco Systems, Inc.)**

Case: Commil USA, LLC v. Cisco Systems, Inc., et. al.

Case No. 2:07-CV-341-DF-CE

Location: UNITED STATES DISTRICT COURT EASTERN DISTRICT OF TEXAS MARSHALL DIVISION – Hon. Charles Everingham IV

Testifying expert on invalidity regarding short range communication protocols.

Opening Expert Report

12-23-09

Videotaped Depositions:

02-09-10

Attorneys: For Plaintiff: Sayles Werbner

For Defendant: Simpson Thacher & Bartlett LLP

Status: Jury award for original trial and retrial: patents found valid and infringed.

6/2007 – 4/2009 **Client: Common Interest Group of Co-Defendants**
11/2010 – 4/2012 **Client: Common Interest Group of Co-Defendants**

Case: Commonwealth Scientific and Industrial Research Organisation v. Toshiba America Information Systems, Inc., et. al.

Case No. 6:06-cv-00550-LED

Case No. 6:09-CV-0399 (LED)

Location: UNITED STATES DISTRICT COURT EASTERN DISTRICT OF TEXAS TYLER DIVISION – Hon. Leonard Davis

Testifying expert in this patent case involving wireless LAN technology.

Declarations:

06-05-08 Regarding claim construction

12-17-08 Supporting opposition to summary judgment

04-05-09 Supporting motion for reconsideration

02-24-12 Supporting opposition to summary judgment

Expert Reports:

10-08-08 Rebuttal Expert Reports- Re: TI Chips, Re: Marvell Chips, Re: Airgo Chips, Re: Broadcom Chips, Re: Conexant Chips, Re: Ralink Chips, Re: Atheros Chips

01-27-12 Rebuttal Expert Reports- Re: TI Chips, Re: Broadcom Chips, Re: Ralink Chips, Re: Atheros Chips

Videotaped Depositions:
11-1-08, 11-2-08, 02-14-12

Attorneys: For Plaintiff: Townsend & Townsend LLP

For Defendant: Keker & Van Nest, LLP

Status: Jury trial: patents found valid and infringed.

10/2006 – 8/2009 **Client: Keker & Van Nest (representing Comcast Corporation)**

Case: Rembrandt Technologies, Inc. v. Comcast Corporation

Case No. 2-05-CV-000443 (TJW)

Location: UNITED STATES DISTRICT COURT EASTERN DISTRICT OF TEXAS MARSHALL DIVISION – Hon. T. John Ward

Testifying expert in this patent case involving physical layer and data link layer communication protocols for cable networks.

Declaration:

01-10-07 Support of Claim Construction Brief

Videotaped Deposition:

12-22-06 Regarding claim construction opinions

Attorneys: For Plaintiff: McKool Smith

For Defendant: Keker & Van Nest

Status: Case settled

3/2007 – 5/2007 **Client: Niro, Scavone, Haller and Niro (representing MLR, LLC)**

Case: MLR, LLC v. Kyocera Wireless Corporation and Novatel Wireless, Inc.

Case No. 05-CV-0935 B (AJB)

Location: UNITED STATES DISTRICT COURT SOUTHERN DISTRICT OF CALIFORNIA

Testifying expert in this patent case involving cellular phone technology.

Expert Report:

04-20-07 Expert Report regarding infringement

Attorneys: For Plaintiff: Niro, Scavone, Haller, and Niro

For Defendant: Hogan & Hartson, LLP

Status: Case settled

6/2006 – 10/2006 **Client: Thompson & Knight (representing Ericsson, Inc.)**

Case: Fenner Investments, Ltd., v. Juniper Networks, Inc. et. al.
Case No. 2:05–CV–05 JDL

Location: UNITED STATES DISTRICT COURT EASTERN DISTRICT OF TEXAS MARSHALL DIVISION

Testifying expert in this patent case involving wireless communications services.

Expert report regarding infringement and invalidity

5-23-06 Rebuttal expert report regarding infringement and invalidity

Attorneys: For Plaintiff: Fulbright & Jaworski

For Defendant Ericsson: Thompson & Knight

Status: Case settled

12/2003 – 5/2006 **Client: Howrey LLP/ Winston & Strawn LLP (representing McKesson Information Solutions, Inc.)**

Case: McKesson Information Solutions, Inc. vs. Bridge Medical, Inc.
Case No. CIV S-02-2669 FCD KJM

Location: UNITED STATES DISTRICT COURT EASTERN DISTRICT OF CALIFORNIA – Hon. Peter A. Nowinski

Testifying expert in this patent case involving a patient on a patient identification and verification system that incorporates wireless technology.

Inequitable Conduct Trial live testimony:
5-04-06

Markman Hearing live testimony:
6-29/30-05

Videotaped Depositions:
2-14-04, 6-3-05

Declarations:
12-1-03 Dec. in support of MISI's Opening/Opposition re Claim Construction
12-24-04 Dec. in support of MISI's Motion for Preliminary Injunction
3-1-04 Dec. in support of Claim Construction
6-29-04 Dec. re meaning of "Communication"
7/15/05 Dec. in support of MISI's Opposition to Bridge's Motion for Summary Judgment

Attorneys: For Defendant: Morrison & Foerster

For Plaintiff: Howrey Simon, Winston & Strawn, Morgan Lewis

Status: Bench trial on inequitable conduct: Verdict found inequitable conduct.

07/2003–02/2006 **Client: Heller Ehrman LLP (representing Texas Instruments, Inc.)**

Case: Texas Instruments, Inc. and Stanford University vs. GlobespanVirata, Inc.

Provided discovery of evidence used at trial, concerning the structure and operation of Globespan's ADSL products, and supported litigators in depositions of Globespan engineers.

Attorneys: For Plaintiff: Heller Ehrman

For Defendant: Covington & Burling, LLP

Status: Jury award.

## Patents

| Patent Number | Date Issued | Title |
|---|---|---|

| | | |
|---|---|---|
| 10,332,121 | June 25, 2019 | Light-based Data Entry for Personal Inventory and Product Support System |
| 9,978,037 | May 22, 2018 | Personal inventory and product support system |
| 8,995,996 | March 31, 2015 | Methods and apparatus for performance optimization of heterogeneous wireless system communities |
| 8,935,580 | January 13, 2015 | Multimedia-aware quality-of-service and error correction provisioning |
| 8,468,426 | June 18, 2013 | Multimedia-aware quality-of-service and error correction provisioning |
| 8,189,538 | May 29, 2012 | Reconfiguration of a communication system |
| 8,144,640 | March 27, 2012 | Location tracking in a wireless communication system using power levels of packets received by repeaters |
| 8,064,380 | November 22, 2011 | Reconfiguration of a communication system |
| 8,027,637 | September 27, 2011 | Single frequency wireless communication system |
| 7,957,741 | June 7, 2011 | Token-based receiver diversity |
| 7,876,704 | January 25, 2011 | Tunneling protocols for wireless communications |
| 7,689,210 | March 30, 2010 | Plug-n-playable wireless communication system |
| 7,672,274 | March 2, 2010 | Mobility support via routing |
| 7,668,542 | February 23, 2010 | Token-based receiver diversity |
| 7,515,557 | Apr 7, 2009 | Reconfiguration of a communication system |
| 7,236,470 | Jun 26, 2007 | Tracking multiple interface connections by mobile stations |
| 7,149,196 | Dec 12, 2006 | Location tracking in a wireless communication system using power levels of packets received by repeater |
| 6,965,769 | Nov 15, 2005 | Testing Center |
| 6,862,448 | Mar 1, 2005 | Token-based receiver diversity |
| 6,788,658 | Sep 7, 2004 | Wireless communication system architecture having split MAC layer |
| 6,760,318 | Jul 6, 2004 | Receiver diversity in a communication system |
| 6,557,134 | Apr 29, 2003 | ARQ method for wireless communication |
| 6,259,911 | Jul 10, 2001 | Network operations center hardware and software design |

## Education

| Year | College/University | Degree |
|---|---|---|
| 1993 | Stanford University | PhD, Electrical Engineering<br>Thesis: "Trellis Coding for Multi-Level, Partial-Response Continuous Phase Modulation with Precoding" |
| 1988 | Stanford University | MS, Electrical Engineering |
| 1985 | Rensselaer Polytechnic Institute | BS, Computer and Systems Engineering |

## Publications

Goldhamer, M., Grandblaise, D., Bims, H., Feng, S., Piggin, P., Sydor, J., and Wu, X. "Coexistence between 802.16 Systems Operating in Shared Bands", *Radio Resource Management in WiMAX,* John Wiley & Sons, 2009.

Bims, Harry. "Surveying the Wireless LANdscape. Or Why Large Wi-Fi Networks Require Good Planning." Xchange. [Online] Available http://www.xchangemag.com/articles/391supsys1.html, September 1, 2003.

Bims, Harry. "Building Voice-Ready Wireless LANs" Wireless Week. [Online] Available http://www.wirelessweek.com/article/CA319429.html?spacedesc=Departments, September 1, 2003.

Bims, Harry. "Enabling Voice over WLANs". White Paper. [Online] Available. http://airflownetworks.com/solutions/pdf/vowlan_wp.pdf. September 2003.

Bims, Harry. "Securing Enterprise WLANs". White Paper. [Online] Available. http://web.archive.org/web/20040303212529/airflownetworks.com/solutions/pdf/securing_wlans_wp.pdf. August 2003.

Bims, H. and Cioffi. J. "Trellis Coding for Full-Response CPM", *Third Generation Wireless Information Networks*, Kluwer Academic Publishers, 1992.

Bims, H. and Cioffi. J. "Trellis Coding for Full-Response CPM", *WINLAB WORKSHOP*, East Brunswick, NJ. October 18-19, 1990.

Bims, H. and Cioffi, J. "Trellis Coding for Partial-Response CPM", *1991 International Symposium on Information Theory*, Budapest, Hungary. June 24-28, 1991.

Bims, H. and Cioffi, J. "Trellis Coding with M-ary MSK Constraints", *GLOBECOM '89*, Dallas TX. Nov. 1989.

## Professional Associations and Achievements

- Jan 2009 – Present Vice-Chair and Board of Directors, Menlo Park Chamber of Commerce
- Nov 2007 – Sep 2010 Vice-Chair and Secretary, IEEE 802.16h License Exempt Group
- Feb 2002 – Jan 2011 Member, City of Menlo Park Planning Commission (2006 Chairperson, 2005 Vice-Chairperson)
- Feb 2012 – Present Senior Member, IEEE
- Jan 2000 – Dec 2000 Chair, IEEE Engineering Management Society – Silicon Valley Chapter
- Jun 1985 - Jun 1991 AT&T Bell Laboratories Cooperative Research Fellow